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THE

McGILL NEWS

VOLUME 13 DECEMBER, 1931 NUMBER 1

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EXTENSION WORK AT COLUMBIA UNIVERSITY
by MARGARET BARNARD PICKEL

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This magazine is distributed to the members of the Graduates' Society of McGill University—Annual Dues $3.00. To those not eligible for membership in the Society, the annual subscription is $3.00.
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WHOM McGILL DELIGHTED TO HONOUR

This photograph, taken on the occasion of the Reunion Convocation, shows from left to right: Dr. Harvey Smith, Med. '97, former President of the British and Canadian Medical Associations; the Hon. Alexander Cameron Rutherford, Arts and Law '81, the first Prime Minister of the Province of Alberta; the Right Hon. the Prime Minister of Canada; the Chancellor; Francis W. Maclennan, Sci. '98 and '00, mining engineer; and the Principal. Major-General R. U. Patterson, Med. '98, Surgeon-General, United States Army, who was to have received an LL.D. degree on this occasion, was unable to be present.

The Third Quinquennial Reunion

By FRANK H. RAND

WHEN McGill achieved its centenary, ten years ago, the graduates celebrated the occasion by a reunion, alumni returning from far and wide to their Alma Mater. The success of that gathering suggested that regular renewals of auld acquaintance would be advisable and the McGill Graduates' Society instituted Quinquennial Reunions, the third of which took place last October.

Many former vitriolic correspondents of *The Daily* and confident campus strollers might have felt that they were pacing strange ground upon their return had not the programme for October 14–17 last been closely identified with student activities. As it was, those who registered at the Mount Royal Hotel had a bewildering choice of functions that brought out every feature of college life. Many a graduate who asked at the registration desk for a list of those in his year who were attending must have left McGill wondering how he came to see so little of them.

But the compensations for such inelasticity of time were many. First of all, on the Wednesday morning, came the special Reunion Convocation, for the conferment of honorary degrees. Over the footlights of Loew's Theatre, students and graduates watched, with sustained attention, in marked contrast to the exuberance of the snake parade which went before, the familiar academic ritual. This culminated in a speech by the chief recipient, the Hon. R. B. Bennett, who confidently voiced a message of faith in Canada's buoyancy during the existing depression.

Other candidates to receive the degree of Doctor of Laws were F. W. Maclennan, B.Sc., '98 and B.Sc. '00, Engineer and Mineralogist; Hon. A. C. Rutherford, B.A. '81, B.C.L. '81, LL.D., Chancellor of the University of Alberta; and W. Harvey Smith, M.D. '92, M.A., President, Canadian Medical Association and Past President, British Medical Association.

In the mornings of the Reunion week, many

graduates took advantage of the exhibitions in the Medical and Technical Buildings, which provided refresher courses along the lines of their professional interests. The libraries and museums also contributed to the pleasure of those who, if not exactly on study bent, were at least inclined that way. Many who did not know much about our founder, James McGill, were given food for thought by the McCord National Museum, which furnished an exhibit relating to his life and personal friendships.

Mr. G. B. Glassco, Secretary of the Graduates' Society, in his unstinted efforts to provide all things for all men—and women—had arranged for golf privileges in the afternoons at local clubs. Unfortunately, the weather on the allotted days, Wednesday and Thursday, was not propitious. Many were wisely prompted, in consequence, to attend the opening on the latter afternoon of the new wing of the R.V.C. Here a reception was held and tea served, a most attractive way of allowing visitors to appreciate the economical beauty and lovely furnishings of the new structure.

The Smoking Concert on Wednesday evening at the Black Watch Armoury was a great success. Seven hundred lined the indoor ring to watch boxing, wrestling, and vaudeville. By the time the pipers began to parade the hall, the Sassenachs were well fortified to stand anything and bore the strains nobly. Sir Arthur Currie made a ringing speech at the Concert, pointing out the pride and dignity of the tradition that is McGill's.

The feminine contingent to the Reunion gathered the same evening in Moyse Hall at a special meeting of the Alumnae Society for the purpose of presenting Miss Hurlbatt's photograph. Afterwards, those who have been absent from college dramatics for some years were impressed by the technical efficiency and skill of this section of the Department of English, as exemplified by a playlet to which they were introduced. "The Wedding," a farce directed by Miss Leona Gray, was thoroughly appreciated, and will encourage Montreal alumnæ to patronise the regular student productions of the present season.

It was noticeable on Thursday that the informal luncheons in the Mount Royal Hotel jumped quickly into favour, and practically eliminated, as far as the Graduates' Society's arrangements could, the isolation of a few who were rather disappointed to find that they were the only registrants of their respective classes.

The evening of Thursday saw the Reunion Ball, at the Mount Royal Hotel. Some fear had at first been felt about the likelihood of a small attendance, but the packed dance floor and the well-filled foyers assured the committee that their judgment had been good, and that terpsichore does not nowadays retreat before the advancing years.

Friday's programme was the most crowded of all. At noon the Past Presidents of the McGill Union gathered to celebrate with the Past Presidents of the Students' Council the twenty-fifth anniversary of the opening of the Union. Later, in showery weather, alumni watched McGill retain the Intercollegiate Track championship and set up two new records. The evening was the evening of banquets, notable for the Chancellor's speech before the men at the Mount Royal Hotel, when Mr. Beatty demonstrated the inherent stability of our country, and outlined a policy for the University, a policy which, if carried through, will assure the continuance of McGill's eminence among the universities of the Continent.

The continued bad weather on the Saturday did little to damp the spirits of those who turned out to see McGill carry off a last-minute victory against the 'Varsity Rugby team. Both sides seemed determined to score a rouge for each year since the match was instituted, exactly five decades ago, and fourteen were registered, eight by McGill. During the interval McGill ran away with the relay race, which proved less competitive than the Old Boys' Handicap of the day before.

McGill's opportunity of capturing three straight intercollegiate championships was nullified by the loss to 'Varsity of the boat race on the Lachine canal. At the class dinners which terminated the festivities of the *alumni rediti* Saturday evening, however, there was ample rejoicing in the fact that our colours had been held high. Those who experienced the savour and glow of the Third Quinquennial Reunion left convinced that the world is not going entirely to the dogs, despite all the croaking and viewing with alarm of the most determined pessimists.

Alumnæ Activities

Echoes of the Reunion

THE Reunion gave, as reunions should, welcome opportunities for the renewal of associations with the past. Miss Hurlbatt was greatly missed, but while not actually present, she sent ample testimony of her continued interest in McGill and the R.V.C. There was

her own portrait, presented by the Alumnæ, and at once hung in the proper place in the old Common Room. There was the fine photograph of Sir William Peterson, presented by her and hung just in time for returning graduates to see it, in the Entrance Hall of the new building. There was the smaller, more intimate, photograph of the venerable Founder of the Royal Victoria College, also presented by her, and, on the occasion of the Opening, placed on the Founder's own piano in the new reception room. There was the presentation of the jewel, an incident carefully planned by the late Warden, to serve for all time as a delicate link connecting the history of our College with that of its overseas prototypes.

Through Miss Hurlbatt also came the renewal of another association in the form of a kind message from Professor Slack to his old students in the R.V.C. "My activities in the Ladies' Department of McGill," says Mr. Slack in a letter to the late Warden, "began before the existence of the R.V.C. and were extended over twenty-nine years. My experiences there were wholly pleasant and will always live in my memory. . . When the meeting takes place in October, kindly convey my warmest greetings to my old pupils and assure them that I shall never cease to remember them."

The presence of Miss Oakeley, beloved first Warden of the College, was the greatest satisfaction to its early students. Their only regret was that she was not supported by those other figures so intimately associated with the beginnings of history in the R.V.C.—Marie Louise Puech, Milhau and Clara Lichtenstein. Toward them went many memories when classes came together to talk over undergraduate days.

Alumnae Meeting in Moyse Hall

On the first evening of the Reunion period, the Alumnæ Society held a meeting in Moyse Hall, open to all women attending the Reunion and followed by a reception in honour of Miss Hilda D. Oakeley, first Warden of R.V.C. Miss Zerada Slack, the President, welcomed the assembly, and outlined the history of the Alumnæ Society since its foundation in 1884, pointing out the importance of interesting students in the Society before they graduated—perhaps by founding scholarships—and picturing a possible donation to the college of a Women's Union, containing gymnasiums, a swimming pool, and recreation halls.

Miss Mabel King, on behalf of the Alumnæ Society, presented the Royal Victoria College with a picture of Miss Hurlbatt, speaking most appreciatively of her character and personality and of her unfailing interest in and kindness to the girls under her charge.

A one-act play, "The Wedding" was successfully presented by students of the English Department, under the direction of Miss Leona Gray.

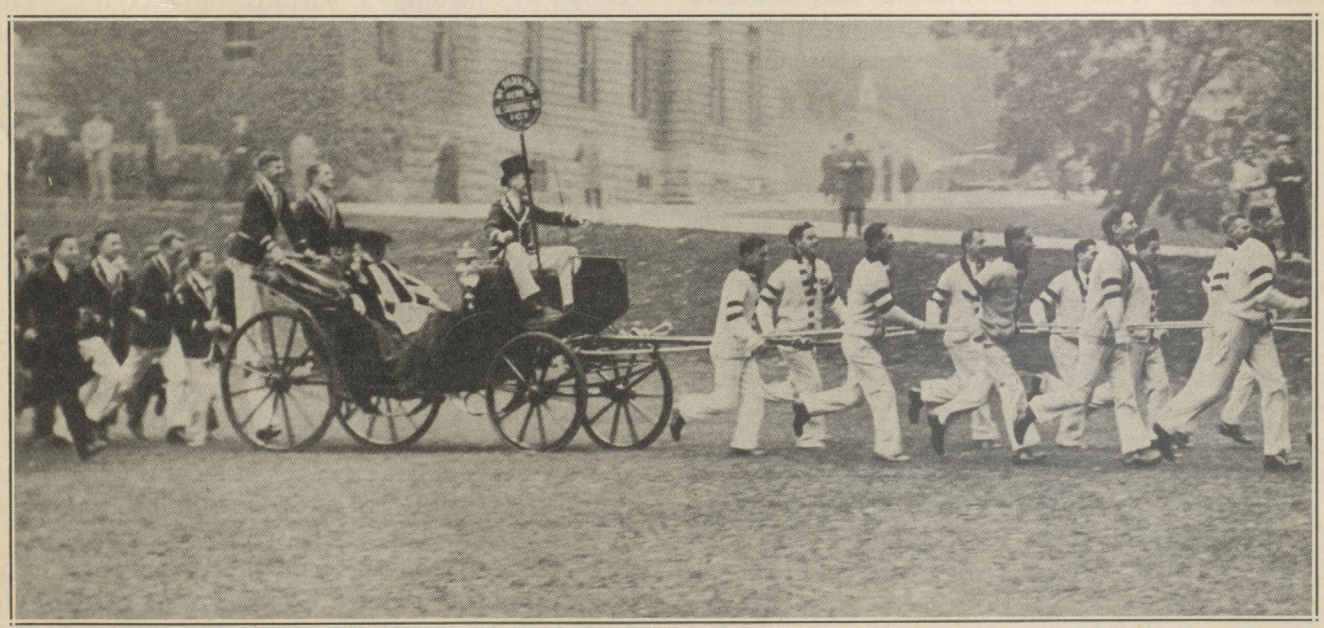


Photo by courtesy of the Montreal *Star*

UNDERGRADUATES WELCOME THE PRIME MINISTER TO McGILL

The Prime Minister of Canada and the Chancellor of McGill in the University grounds previous to the Reunion Convocation at which the former received an honorary LL.D. degree.

Opening of R.V.C. Wing

The opening of the new wing of the Royal Victoria College, on Thursday, October 15, was an outstanding event of the Reunion. The guests were received in the new drawing rooms by Mrs. Vaughan, present Warden, and Dr. Hilda Oakeley, first Warden of the College.

A feature of the afternoon was the presentation to Mrs. Vaughan of a handsome jewel of tourmaline, of Portuguese workmanship, the gift of Miss Hurlbatt, who had arranged that her gift was to be known as the "Madeleine Shaw LeFevre Jewel."

Miss Madeleine Shaw LeFevre, first Principal of Sommerville College, Oxford, had presented this jewel to Miss Hurlbatt upon her departure to assume duties at McGill in 1906. To perpetuate the memory of Miss Shaw LeFevre, Miss Hurlbatt wished the jewel to be presented to the Warden, to be passed on by her to future wardens of the College.

Professor Carrie Derick, one of McGill's most distinguished women graduates, spoke of the early days of women at McGill; and Dr. Hilda Oakeley spoke of her experiences in the first years of the Royal Victoria College. Following the reception, the guests were conducted on a tour of the new building, whose attractions and comforts were greatly admired.

The Alumnae Dinner

Three hundred and thirty-three persons attended the Alumnæ Dinner in the Windsor Hotel, on October 16. These included graduates of the University and those who had studied in departments whose courses do not lead to degrees. Class tables reunited those who had been associated in their student days, while the long head table accommodated officers of the Alumnæ Society and special guests.

The toast to the King was proposed by Miss Zerada Slack, the President; Mrs. Walter Lyman, past-president of the Society, proposed the toast to "Our Alma Mater," to which Mrs. Vaughan responded; and Senator Cairine Wilson, one of the guests of honour, outlined the early history of Montreal, picturing aspects of the status of women and their achievements in other days.

Those at the Head Table included: Hon. Cairine Wilson, Lady Currie, Miss Hilda D. Oakeley; Miss Beatrice Curotte, of the University of Montreal; Mrs. Macdonald, representing the alumnæ of the University of Toronto; Miss Beryl Truax, representing Queen's alumnæ; Mrs. Walter Vaughan, Dr. Helen R. Y. Reid, Dr. Maud Abbott; Miss D. A. Heneker; Miss Elizabeth Monk, representing the University Women's Club of Montreal; Mrs. Lucie Furness-Touren; Miss Doreen Harvey-Jellie, President of the Women's Undergraduate Association; and officers of the Alumnæ Society.

Reunion Reports

SHORTLY before going to press, *The News* received copies of the reports in regard to the Reunion by C. G. Mackinnon, Chairman of the Entertainment Committee, and by the Executive Secretary, the former including the report of W. A. Grafftey, Chairman of the Smoker Committee.

Mr. Mackinnon's report, a most valuable and comprehensive document, summarizes succinctly the main entertainments of the Reunion programme, with comment regarding the success attained and advice for future guidance that should contribute markedly to the success of the fourth Quinquennial Reunion in 1936.

Mr. Glassco's report covers in detail the manifold Reunion activities, paying tribute to a number of those, notably G. McL. Pitts, Chairman of the Committee on Branch and District Organization, whose unstinted work made possible the striking success that the Reunion achieved. The report also presents the financial details of the gathering and a summary of the registration. In all, 1,220 graduates registered; expenses totalled $6,288.69 and revenue was $6,748.75, leaving a surplus of $460.06. The excellence of the preliminary staff work and the accuracy in judging revenue and expenditure is revealed by the fact that the ultimate surplus differed from the estimated surplus only by $50.38.

Reunion Greeting from Japan

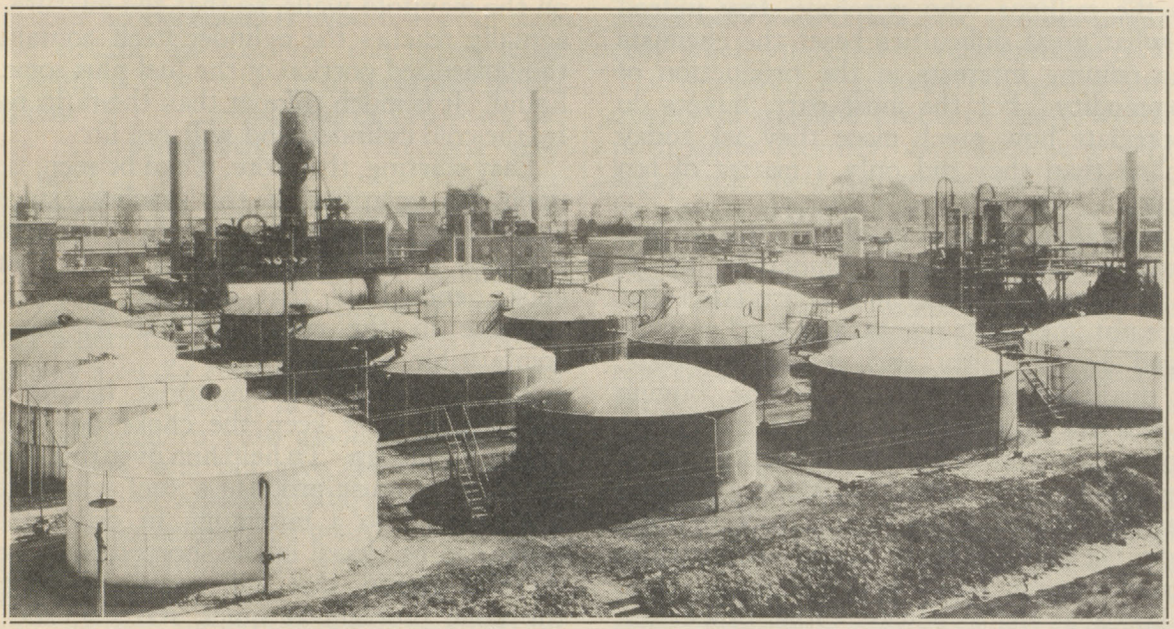
THE following greeting from graduates in Japan was received at the time of the Reunion:—

"Dear Alma Mater,

"As you once more gather your children to the Reunion of 1931, we who live in the Japanese Empire salute thee. . .

"O, Mother McGill, remember us, thy children, who fondly here append our names. Our hearts now seek to travel far across the rolling, misty billows of the North Pacific. No Rocky Range can check our homeward thoughts, nor widening

(Continued on Page 51)



THE PLANT OF THE McCOLL-FRONTENAC COMPANY IN MONTREAL

In this plant, on the north shore of the St. Lawrence, are 64 storage tanks, of varying dimensions, with a total capacity of 35,000,000 gallons. Such figures reveal the tremendous growth that the oil refining industry has enjoyed in recent years.

Problems in Refining Gasoline

By COL. W. A. BISHOP, V.C.
Vice-President, McColl-Frontenac Oil Company, Limited

THE phenomenal progress of the automobile industry since its inception has been even exceeded by what can fairly be termed its sister industry—the refining of gasoline. Before the invention of the internal-combustion engine, three decades ago, gasoline was nothing more than a waste by-product.

But in spite of the fact that the motor industry made possible the great development in the refining of gasoline, and that progress in refining was for a long time secondary to the progress of the automobile industry, during latter years this order has changed. Engines, having reached an advanced state of efficiency, had some years ago come to a point where the greatest engineers found difficulty in going further. Help then came to them from the Refiners, who were able to improve the quality of gasoline sufficiently to allow the motor designers the scope they required to incorporate the refinements we appreciate so much today in the efficient high-compression motor. The engineer, restricted in his progress in improving his motor design, was helped at the opportune moment by the gasoline industry, which his own industry had fostered.

From a waste by-product, gasoline has become one of the leading manufactured commodities produced in the world today, particularly on this continent. Few people stop to think what a tremendously important part it has taken in the development of this country. The automobile, undoubtedly, produced the need for good highways, which have brought with them the multitude of advantages that result from the opening up a country with good roads. The cost of these roads has been largely financed by the tax on the gasoline, used by automobiles and trucks. It is estimated that in North America during 1930, over 50% of the power developed was developed by gasoline, and the gasoline tonnage is estimated at nine-tenths that of steel.

Gasoline is, however, a much more interesting subject to the layman than steel, as it is a commodity which so many people are buying daily.

But to the millions who purchase, few indeed realize what great difficulties beset the chemists and the refining interests in the production of this commodity. For the most part, buyers do not appreciate how much more they ask today of gasoline than they did only a matter of ten years ago.

It is not so long ago that gasoline in the public's mind was judged, in blissful ignorance, by its colour and gravity. Today it is appreciated that these are not important points, and good gasoline is judged by volatility and detonation tests. Many qualities are required by the buying public and are necessary to operate the newer types of motor cars. These are: primarily ease in starting a cold motor, normal functioning without choke at the lowest possible temperature, uniform feed from the carburetter, and combustion under high-compression pressures with minimum detonation or knock, as well as power. Other properties, such as odour, corrosive qualities of the fuel itself, or of its exhaust gases, crank case dilution, and formation of deposits, are secondary, but are important points which must be watched.

The Refiner, then, having solved the problem of the properties which his gasoline must possess to meet the public's demands, and the demands of the modern automobile engine, must turn his mind to problems which more directly concern himself and those who will be handling the fuel before it reaches the consumer. The two most important points in this connection are to insure a minimum evaporation loss, and also to have such a stable product that storage over a long period will not set up any chemical or physical change.

A very serious difficulty, too, that he must face in Canada particularly, is that, with a climate having such extremes as ours, quite a different gasoline is required in the warm weather from that needed in the cold weather. In order to meet this difficulty, he has to change the composition of the gasoline six times every year, and it is through such care and thought as this that the Canadian public is supplied with possibly the finest and best motor fuel in the world.

I mentioned that one of the most important requirements in motor fuel is that of quick starting. It is possibly the first in order of importance from the motorist's point of view. The problem is this. In order that the charge in the cylinder of a cold engine may fire or explode, the mixture of gasoline and air drawn into the cylinder through the manifold must be richer than the normal air-gasoline ratio. The bulk of the gasoline in a cold engine is not volatilized, but remains in the form of a liquid spray, and settles on the manifold walls, so that the mixture which actually reaches the cylinder itself contains only the volatilized portion of the fuel plus some slight liquid. It is much thinner than the ratio required by the cold cylinder, and will not fire.

Easy starting, therefore, it can be seen, depends upon the volatility of the gasoline, since it is evident that even with the help of an artificially enriched mixture, produced by pulling out the choke, enough of that enriched gasoline must vaporize in the cold manifold to produce a combustible mixture.

In cold weather, the motorist, having started his engine, must keep the choke out until the engine warms up. To help him over this difficulty, the Refiner must produce a fuel which reduces this trouble to a minimum, in order that the choke can be closed in the shortest possible time. At first glance, this will appear to be exactly the same problem as quick starting, and to be purely a question of the volatility of the gasoline. It is a question of volatility, but closer study shows that the volatile requirements in this case are somewhat different to those required for quick starting, the reasons for this being that the liquid gasoline, which was deposited on the manifold walls during the period of starting the engine, begins after a few seconds to enter the cylinder in the form of liquid, part of which vaporizes, enriches the mixture, and eliminates the necessity for the carburetter to produce such a highly rich mixture. It is a fact that to get the best result from the engine, and to produce the greatest power, roughly 60% of the gasoline entering the cylinder must do so vaporized. Now, assuming that the carburetter, normally and unchoked, delivers a 12 to 1 mixture, the choke, having been pulled out to start the engine, can only be pushed back when the manifold has reached a temperature that will vaporize 60% of the mixture before it enters the cylinder. Therefore, the more volatile the gasoline is between the manifold temperature of starting and the temperature required to evaporate 60% of it, the shorter will be the period required to artificially choke the carburetter.

The next necessity is good acceleration, and here again the volatility of the fuel is the most important factor. The motorist today wants to be able to put his foot on the accelerator and get immediate response from the engine. This he cannot do if the fuel he is using is of too low volatility, because in that case, with the sudden increase of gasoline into the manifold, a sufficient amount or per cent. would not vaporize quickly enough, and the engine, not receiving the proper mixture, would not respond to the accelerator.

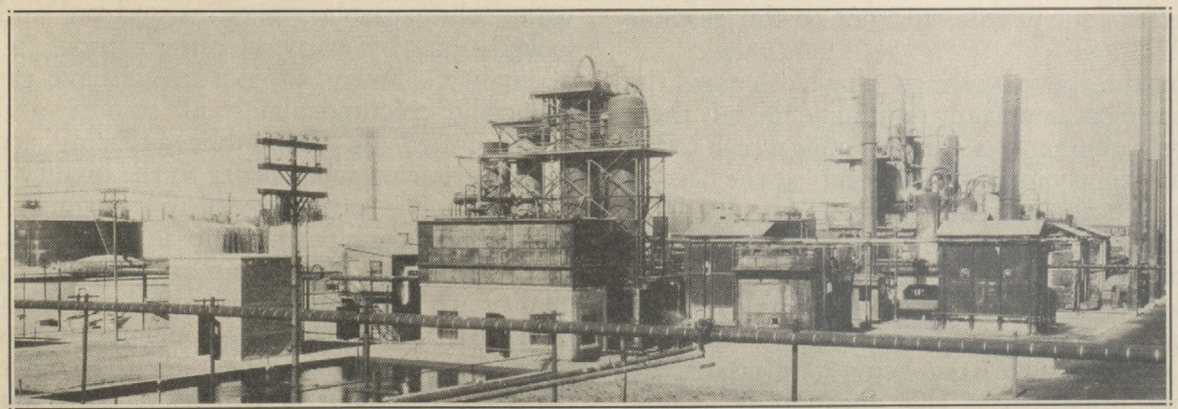
From the above three points, quick starting, choking, and acceleration, it would appear that the more volatile the gasoline, the better it is. This, though, is true only up to a certain point, but it is true that in the last four or five years the volatility of gasoline has been increased very considerably.

If, however, this volatility passes a certain point, other troubles are encountered. Most particularly, the trouble known as gas-lock or vapour-lock. In very warm weather, or in designs of motors where the carburetter becomes heated, gasoline may actually start to boil in the passages leading to the jets, and it is obvious that a carburetter, designed to pass gasoline as a liquid through its jets, will not give the same results if a combination of vapour and liquid is taking its place. This trouble must be guarded against by regulating, or limiting, the amount of highly volatile gasoline in the fuel.

One of the most important points required by the public today is a fuel with a high anti-knock ratio. It is probable that in the minds of a certain proportion of the public, this is the one and only point considered. As I pointed out, the Refiner has a great many other serious and difficult problems to solve, but, in the solving of these, he must always keep in mind the fact that knocking or detonation in the motor must be eliminated. The exact cause of detonation is still unknown. It is apparently an abnormal course of combustion resulting in rapidly developed high pressures, and producing a sharp, metallic "ping" so loathed by all drivers. It is most likely to occur when the throttle is opened sharply at low speed, or when climbing hills.

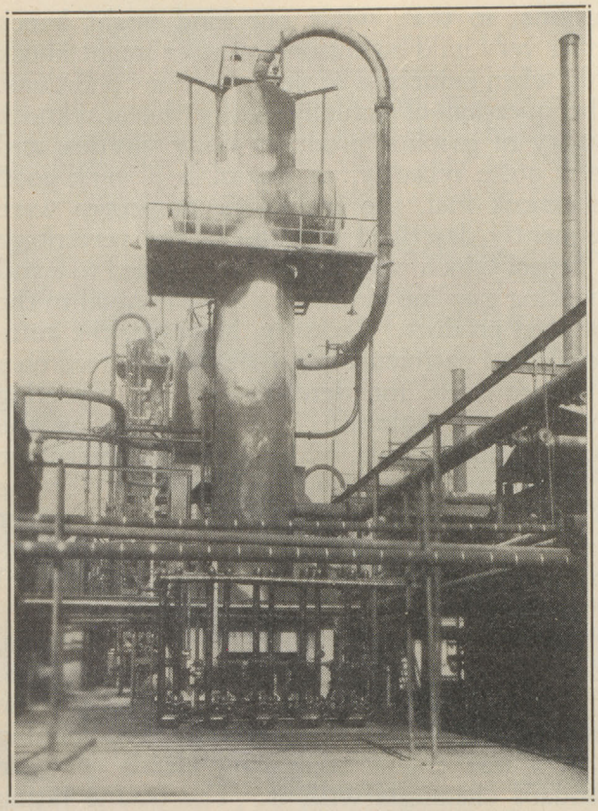
It has been found that the tendency to knock varies with the chemical composition of the gasoline, so that, while one kind might knock under very mild conditions, another might knock only when subjected to very extreme conditions. The question of actually rating the anti-knock quality of gasoline produces many worries, and until quite recently, as benzol is a very good anti-knock fuel, the anti-knock properties were frequently described in terms of the percentage of benzol which would have to be added to a bad knocking gasoline in order to make it equal to the specified product. Recently, however, the automobile and petroleum industries have agreed on a reference scale for determining and reporting knock rating values. This is known as the Octane number scale, which gives the percentage of Iso-Octane in a blend with Normal Heptane to equal the knock rating of the gasoline under test. Iso-Octane is a chemical with a high anti-knock rating, and Normal Heptane is a chemical with a low anti-knock rating. These two chemicals can be obtained with a high purity, and thus, when blended together in definite proportions, will always have a definite knock rating. The octane rating of gasoline is determined by running it in a test engine comparing blends of these standard chemicals with it. The octane rating of the gasoline is then known by the number equal to the percentage of octane in the Octane-Heptane blend.

Mileage obtained by the use of various gasolines is a much discussed subject by the layman motorist. Here he is, in fact, entirely off on a wrong tangent. The mileage result of various fuels of more or less the same volatility is practically identical, except in the case of gasoline containing high percentages of Aromatic Hydro-Carbons, which give gasoline a higher amount of available heat units per gallon, and, therefore,



REFINING PLANT OF THE McCOLL-FRONTENAC OIL COMPANY, IN MONTREAL

This plant, which covers 53 acres, has rail and ocean terminal facilities, two Gyro vapour phase units, two Jenkins high-pressure liquid phase units, and three stripping units, with treater plants large enough to handle the entire output of the units mentioned above. Plant capacity, with complete cracking of all stocks to gasoline, is 175,000 gallons a day.



EQUIPMENT IN THE McCOLL-FRONTENAC PLANT IN MONTREAL

As Col. Bishop's article notes, gasoline is one of the leading manufactured commodities in the world today. In North America in 1930 gasoline production tonnage was estimated to be nine-tenths as great as that of steel.

greater available power; but all gasolines having practically the same heat units per gallon should give identical mileage. The main difference in mileages obtained by motorists is generally due to the difference in their methods of driving and carburetter adjustments, and not to the gasoline itself.

Under the above headings, I have discussed the motorists' most important requirements, but there are a great number of secondary ones which today motorists rightly insist on. Possibly at the head of this list we should put the question of odour. It is generally realized what an obnoxious odour can come off from certain fuel, and it is certainly not possible to enjoy motoring if the inside of your car is going to be filled with evil-smelling fumes which, apart from being unpleasant, are definitely unhealthy. The question of odour, therefore, receives a great deal of thought by the producers.

A further secondary trouble to avoid is having the gasoline contain any chemical properties which might corrode the finer parts of the intake system of the engine, causing starting and other trouble. This frequently occurs in poorer grade gasolines, and can only be eliminated by really good refining. Excessive crank case dilution can also produce worries to the motorist. Low volatility is apt to give incomplete evaporation, and gasoline entering the cylinder as a liquid, and dissolving in a film on the walls, sometimes remains unburned, and works itself into the crank-case, diluting the oil, which seriously affects its lubricating quality. This difficulty is one naturally run into more in cold weather, due to frequent starting.

All these qualities and properties are today absolute necessities in gasoline from the consumer's point of view. The Refiner, however, having solved his problem in that direction, still must overcome difficulties which affect more directly himself, particularly in the matter of handling, transportation, and storage. It is necessary that he keep his gasoline from being too volatile, in order to avoid excessive losses by evaporation. It is also all-important that his product be stable enough to assure against any chemical or physical change during transportation or long storage.

It is now possible to produce gasolines which will meet all these requirements, owing to improvements made in the refining processes during the last ten years. Most notable of these has been the stride made in what is known as the cracking process. Previous to the discovery of cracking, gasoline was obtained from crude oil by simple distillation.

In conclusion, it is most interesting to note that the public have now definitely dropped two points. Only a few years ago they judged all gasoline by colour and gravity. Formerly, a water-white gasoline was insisted on, and was looked upon by many as being a proof in itself of quality. Today, of course, we have gasoline artificially coloured almost all colours, and this is recognized by the public as being artificial and no criterion whatsoever to the quality of the product. The public seem to recognize today that a water-white gasoline is very seldom a good gasoline, as this colour and high anti-knock quality are not often found together. They also know that the artificial colour put in gasoline today has no harmful effect on the engine. In the place of colour and gravity, both the consumer and the producer judge a gasoline by its volatility and anti-knock quality, which is proof that the public today are beginning to know what they are buying and rightly to insist upon the best quality.

The Faculty of Dentistry

By A. L. WALSH, D.D.S.
(Director of the Dental Clinic)

DURING the 1930–1931 session, at the request of the Principal, a survey of the Faculty of Dentistry was made by an appointed committee. In this committee's report, a review of the past decade, the present status, and the future outlook of our Dental School were outlined. A synopsis of the report is herein offered to our graduates through the courtesy of *The McGill News*.

Construction, Building and Equipment:—Nine years ago, a building was erected adjoining the Dental Clinic at the Montreal General Hospital, and equipped with forty-eight chairs and units. Improvements have been many since that time. Twenty-two new dental cabinets have been installed, a resting-room with three beds has been constructed for general anaesthetic cases, and a dental x-ray machine, donated by the Victor X-ray Corporation of Canada, has been installed. The southwest corner of the operating room has been partitioned and equipped for the use of the Orthodontia Department, two operating rooms have been equipped for the Oral Surgical Department, and a complete change has been made in the record system, which now compares favourably with other departments in the hospital. A record system of student operations has been in use since 1926, and graduates may find their record of operations in detail, if they so desire.

McGill Medical Building:—Two additional rooms in the Medical Building have been given to the Dental Faculty for laboratory technique teaching. Compressed air has been installed throughout the dental rooms. A large cabinet has been constructed and now contains teaching models and sample products of a large percentage of the dental manufacturing companies.

A section in the Medical Library has been set apart for dental books; and through the financial assistance of the Montreal Dental Club the number of such books is increasing annually.

Course in Dental Surgery

Pre-Dental Courses:—Whereas, ten years ago, the course leading to the degree of Doctor of Dental Surgery consisted of four sessions of eight months each, the education of a dental surgeon now consists of six years from the date of matriculation, two years in the Faculty of Arts of any recognized university and four years in the Faculty of Dentistry. The addition of two years took effect in 1925. A similar change in the duration of the course took place in most of the recognized dental schools in America. This addition gives the dental student an educational background with which he is better prepared to receive instruction in the courses directly associated with his profession. Furthermore, 784 hours were made available by including in the above two years the subjects, Physics, Chemistry, and Biology.

Comparatively, therefore, the dental graduate of today, through the additional courses, has a broader vision and a better background for future development. At the completion of the two pre-dental years, a student registers with the Dental Faculty for a four-year course, the first two years of which include fundamental medical science subjects, dental anatomy, and dental laboratory technique training. The Dental Faculty is fortunate in having its biological science subjects taught in such highly regarded departments as those of Anatomy, Histology, Physiology, Bio - Chemistry, Pharmacology, Bacteriology, and Pathology. In a large measure through the strength of our curriculum in the above subjects, our School was recently given a high rating by the Board of Dental Education of New York State.

The third and fourth year subjects apply more directly to dentistry and are of a practical nature. The departments will be discussed individually.

New Appointments and Promotions

Administrative Department:—Seven years ago there was a reorganization of the clinical staff. Dr. A. L. Walsh was appointed Associate Professor and Director of the Dental Clinic. Following the retirement, four years later, of Dean A. W. Thornton, Dr. Walsh was asked to carry on with the administrative duties.

Operative Department:—The staff has been increased, giving more adequate supervision and more demonstration to the practical work at the clinic. Students are now required to complete a definite number and definite types of operation, thereby showing ability to give dental operative service to the public. A series of operative tests are given by the head of this department

during the final year. The staff at present is as follows:—Professor F. H. A. Baxter, Drs. W. G. Leahy, H. V. Driver, C. H. P. Moore, P. Silver, F. A. Edward, L. F. McRae, R. G. Seller, and Hamilton A. Baxter.

The survey committee has recommended that a full-time instructor in this subject be appointed and this will undoubtedly be carried out in due course.

Prosthetic Department: — Students are now required to use an anatomical articulator for all denture work. Considerable expenditure has been made in teaching models, which are proving of much assistance. The appointment of Dr. Ira K. Lowry as lecturer, devoting half his time, has done much to increase the efficiency of this course. The appointments of Dr. Winston C. Bushell as head of the Crown and Bridge section, and Dr. Paul R. Marchand as demonstrator, meet with very favourable commendation on the part of the Survey Committee. This section has been developed from almost a nonentity to a course which will, in the not far distant future, compare favourably with similar courses in class A schools. The staff in this department at present is as follows:—Professor G. S. Cameron, Professor J. S. Dohan, Drs. I. K. Lowry, W. C. Bushell, and P. R. Marchand.

Orthodontia:—This department is well organized and working with excellent harmony, and the head of the department, Professor A. W. McClelland, is to be congratulated. Within the past five years the number of hours devoted to this subject have been increased from 182 to 262. Whereas, the subject was formerly taught in the third and fourth years, it now begins with the second year and continues to the end of the course. This department has recently been provided with better demonstrating facilities at the Dental Clinic. The course in general compares favourably with the best on the continent. The staff at present is as follows:—Professor A. W. McClelland, Drs. G. Franklin, M. L. Donigan, and A. R. Winn.

Oral Surgery:—This course has been considerably augmented within the past six years. Twenty-five lectures and demonstrations have been added to the third year course under Dr. A. L. Walsh, and the subject continues throughout the fourth year under Dr. W. L. Barlow. The best co-operation exists between the out-patient department of the Montreal General Hospital and the Dental Clinic, and this reacts to the benefit of the student. The close association with hospital departments helps to give this course a high standing and makes it compare favourably with corresponding courses in other recognized schools.

Dental History, Ethics, and Office Management:—Since the taking over of this department by Dr. Campbell Morris, the subjects have been presented in a more complete manner and it is the feeling of the Survey Committee that this department is in excellent hands.

Anaesthesia:—The courses in general anaesthesia, under Dr. C. C. Stewart, Anaesthetist to the Montreal General Hospital, and in local anaesthesia, under Professor F. G. Henry are well presented. This department has in the past ten years kept abreast with the advances made in this subject.

Dental Pathology:—This course, under Professor F. G. Henry, is beneficial, and has kept pace with advances made in this subject.

Dental Anatomy:—This is an important course; in its nature it is a disciplinary course, but in addition should serve to bring out in the student the appreciation of art and design. The head of this department is Dr. Johnston W. Abraham.

In so far as the policy of the Dental School is concerned, we cherish the memory of those who built up in this community the foundation of a dental teaching centre, the number including the late Dean A. W. Thornton, to whose memory a tablet was recently erected in the Medical Building; the late Dr. Peter Brown, the late Dr. J. B. Morison, the late Dr. W. Giles, Dr. J. S. Ibbotson, Dr. D. J. Berwick, Dr. F. A. Stevenson, Dr. Clifford Jack, Dr. W. Watson, and others.

Our aim is to make our students sound, scientific, practitioners of dentistry, thoroughly trained in the biological sciences, well qualified to think wisely and act skilfully. Only well qualified students are selected, as our policy is to exercise wisdom in such selections, for in this, we believe, lies the future of our school.

The curriculum is so designed to take care of the needs of the general practitioner first and foremost. Our graduates, however, are gradually finding their way into the field of research through the departments of Histology and Physiology. To our Principal, Sir Arthur Currie, as well as to the Medical Faculty, we would express appreciation for their interest and co-operation. Professor J. C. Simpson, Secretary of the Medical Faculty, has been a much appreciated guide in the development of a balanced curriculum.

The need of a well equipped Dental Building is being given careful consideration. Much discussion from time to time has taken place in the matter of a better located and equipped dental infirmary. Some have felt that the Royal



THE ORTHODONTIA TEACHING CLINIC

The Orthodontia Department of the Faculty of Dentistry, under Professor A. W. McClelland, has recently made marked progress. Hours devoted in the dental course to the study of this subject have been increased from 182 to 262.

Victoria Hospital, being closer, would save considerable time on the part of the student, if the infirmary were established there. Others have voiced the opinion that a well equipped dental building should be erected in the University grounds. As this article is to our graduates, let me assure you that your opinion will be received with appreciation. Your Alma Mater expects your continued interest and the Dental School invites your co-operation.

Scholarships from $200 to $250 yearly, if available, would enable the School to take in well qualified students who are unable to pay the expenses of their tuition and McGill graduates are urged to give the establishment of such scholarships their consideration. We need, too, a full-time teacher in both the Operative and Prosthetic departments. This need, we hope, will be filled as soon as economic conditions are improved. With such additions the Dental Faculty could offer post-graduate training. Meanwhile, graduates are invited to return to the School to brush up on the courses taken in their undergraduate days, and which are constantly improving.

Enrolment:—Previous to the addition of two pre-professional years, every school was experiencing increased student enrolment, due to the return of many young men who had participated in the Great War. This increase was correctly considered to be temporary, therefore the return to pre-war conditions, combined with the instituting of two pre-dental years, created a very considerable drop in student enrolment. As Dr. William Gies has noted:

"The Carnegie Foundation's Report for 1930 will contain this statement: 'The total attendance at the dental schools in the United States has steadily decreased from a maximum of 13,000 in 1922-23 to 7,679 in 1929-30, an average annual loss of 774 students, or approximately 19 per school per year.' In Canada, the total attendance has shown an analogous fall from a maximum of 1,249 in 1920-21 to 338 in 1929-30, an average annual loss of 101 students, or about 21 per school per year.

Much has been done during the past year to inform the public of the need of English-speaking dentists, and to interest the High School matriculants in dentistry as a profession. Newspaper articles, addresses to various organizations, communication by letter with forty High Schools in this Province, and the distribution of dental calendars containing information relative to the courses in Dentistry are all means which have been used to this end at McGill University. More can and will, no doubt, be done by the Faculty to increase the present enrolment, for there is an insufficient number of dentists in the Province at the present time.

With the high standing attained by our students, the strengthening of the various departments and the curriculum, and the excellent co-operation received from our Principal, we should look forward to the future with confidence.

Dentistry as a Profession:—Many calls and communications are received by the Dental Faculty from young men in the final year of High School, from students in the first and second years of Science and Arts, and occasionally from a graduate, asking for information in regard to the opportunities offered by the dental profession.

It is the youngest of professions, having been taken over by the universities not more than sixty years ago. McGill University offered its first course in Dentistry twenty years ago. The importance of a healthy mouth in relation to a sound body was soon emphasized. Dr. Mayo is quoted as saying "Seventy-five per cent. of all ailments of the human body originate above the neck and a large percentage of these in the oral cavity." It has recently been stated that a large percentage of cancers of the mouth could be prevented by maintaining a clean, healthy mouth, with no irritating factors such as sharp cuspid teeth, or ragged edges on plates and bridges. A dental surgeon, therefore, is a member of a healing art profession, a noble calling, I think you will agree.

At present the general practice of dentistry calls for ability:—

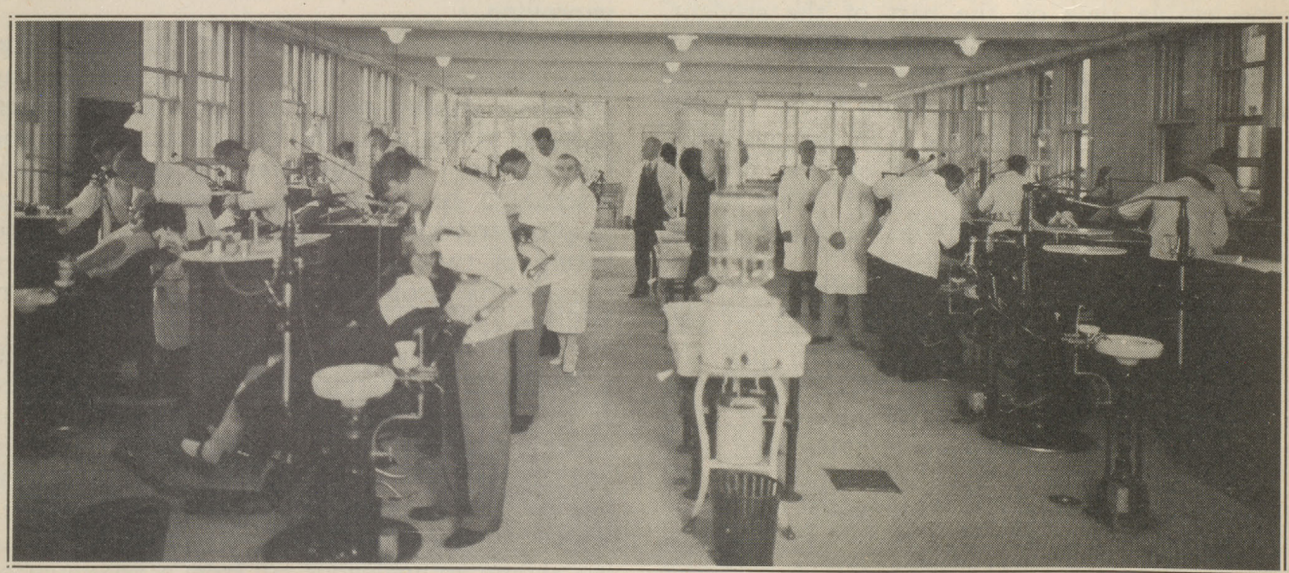
1. To diagnose the case from a study of the mouth and of x-rays.
2. To perform minor oral surgery.
3. To do prophylaxis.
4. To fill cavities, using a variety of materials.
5. To make artificial substitutes for lost teeth, such as crowns, bridges and plates.
6. To regulate teeth (Orthodontia).
7. To consult with the patient's physician in regard to diseased conditions of the mouth involving other parts of the body.

This requires a knowledge of the body as a whole. It means that a dentist must be well versed in anatomy, physiology, pathology, bacteriology, and chemistry, in fact in all the sciences necessary for:—

(a) the recognition of disease.
(b) the rendering of proper therapeutic service, medical, surgical, and restorative; and most important of all,
(c) the giving of preventive advice.

Any young man with scientific ambitions has an excellent opportunity awaiting him in the

(Continued on Page 53)



THE UNIVERSITY DENTAL CLINIC AT THE MONTREAL GENERAL HOSPITAL

This photograph, taken specially for *The News*, shows the latest addition to the Clinic in operation. Many improvements have recently been made in accommodation and equipment, and graduates may at any time find the record of their student operations in complete detail.

Annual Meeting of the Graduates' Society

UNDER the presidency of H. M. Jaquays, the annual meeting of the Council of the Graduates' Society was held in the Arts Building at 8.15 p.m. on Tuesday, November 13, 1931.

Following the approval of the minutes of the semi-annual meeting, Dr. F. M. G. Johnson, Chairman of the Editorial Board of *The McGill News*, presented a report, which stated that the magazine had made good progress and, in contrast to a deficit of $544.05 in the previous year, showed a profit this year of $699.09. Dr. Johnson referred to the fact that, through the untiring effort of the Executive Secretary, advertising revenue had been increased by $200 to $8,795, not including $265 worth of advertising for the Reunion, which was presented without charge. He stated that the Board had re-appointed R. C. Fetherstonhaugh as Editor for the coming year.

Stanley A. Neilson then presented the report of the Endowment Fund Committee. He expressed the deep regret occasioned by the death of A. P. Murray, Chairman of the Committee, who for many years had served with such devotion. Continuing, he reported on various features of the Committee's work, noting that the first use of revenue from the fund had been to inaugurate the Graduates' Lectureship and adding that a decision in regard to future expenditure had not at the time been reached. In regard to revenue, Mr. Neilson reported that 526 graduates had contributed $6,500, compared with a total subscription of $8,300 in the previous year and $10,000 the year before. The fund, he stated, now stood at $69,000 in bonds, with a bank balance of $3,493.70.

Dr. G. S. Ramsay then presented a brief report on the Advisory Board of the Students' Council; and S. B. Millen reported on the work of the Athletic Board. Mr. Millen mentioned that J. C. Kemp's term had expired and that P. P. Hutchison had been elected to fill his place. He mentioned also that seven meetings of the Board had been held and that, despite the severely felt lack of a University gymnasium, McGill senior teams had completed a year more fruitful in intercollegiate championships than any previously recorded in Canada.

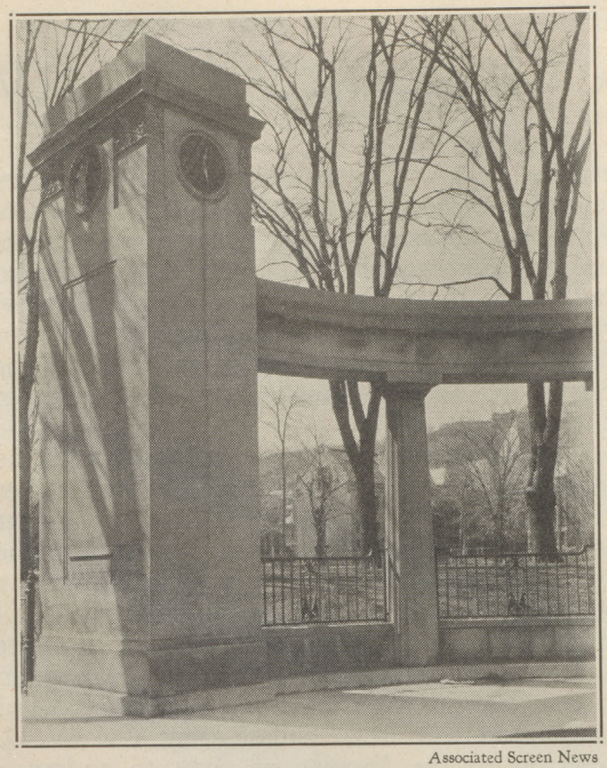
The report of the Society's representatives on the Board of Governors, then presented by G. H. A. Montgomery, included a list of resignations, appointments, and promotions, the more important of which have already been announced in *The News*. Continuing, Mr. Montgomery referred to the reorganization of the Faculty of Arts into the new Faculty of Arts and Science and the appointment of Dr. F. M. G. Johnson as Dean of the Science Division in that Faculty. He referred also to the appointment of Professor Ernest Brown as Dean of what was formerly the Faculty of Applied Science, now the Faculty of Engineering.

Mr. Montgomery's report then dealt with the grant of $110,000 made by the Rockefeller Foundation a year ago in aid of Social Research at McGill; with substantial savings effected in the lighting, heating, and powering of the University buildings; and with bequests and gifts to McGill in the past year. Among the notable bequests were $50,000 from the late Madeleine Ottmann to the Penfield Research Fund for Neurological Surgery; $11,000 from the late Lieut.-Col. W. G. Peterson to the Faculty of Arts to endow a memorial to his father, Sir William Peterson, in the form of a prize in literature and a scholarship in classics; and $10,000 from the late Mrs. Elliott H. Busteed to establish in the Faculty of Law the Edwin Botsford Busteed Scholarship.

In addition to bequests, Mr. Montgomery's report noted gifts of $500 a year for four years from W. M. Birks, Esq., for a classical scholarship to be awarded to a student from the British Public Schools; $3,000 from the Canadian Pulp and Paper Association for two fellowships in cellulose chemistry; $3,600 from Mrs. J. R. Fraser for a three-year scholarship in gynæcology; and $1,000 from the Chancellor, also an increase in the value of the four Beatty Scholarships from $500 to $600 each.

In the absence of the Honorary Treasurer, the Executive Secretary then presented the financial report, verified by Clarkson, McDonald, Currie and Co., chartered accountants. This report showed total revenue of $11,448.38 and expenditure of $10,052.79, leaving a balance of $1,395.59, despite the fact that $748.81 had been spent upon the Employment Bureau, that $368.64 had been written off for depreciation of furniture and fixtures, and that $365.79 had been spent in office alterations. Total assets of the Society were shown to be $26,642.48, including $16,889.83 of bonds which, on September 30, 1931, possessed a market value of $12,830.00.

After presenting the financial report, Mr. Glassco presented his own report as Executive



Associated Screen News

THE CLOCK TOWER OF THE RODDICK GATES

The clock shown in this photograph has proved unreliable and an electric mechanism is being installed to replace it. The new works will be in operation, it is expected, before this issue of *The News* is distributed.

Secretary. He noted progress made by *The McGill News* and referred to valuable work accomplished by the Employment Bureau, which had found permanent positions for 45 and temporary positions for 12 applicants and had been indirectly responsible for placing a number more.

In regard to membership, Mr. Glassco noted an increase in life-members of 26, and reported that 398 ordinary members had joined the Society in the year, plus 276 new members from the graduating classes of 1931. In offset to these gains, 351 members were dropped for non-payment of dues and a number died, bringing the active membership, including life members, to 3,457, compared with just over 3,000 reported at the annual meeting last year.

The Honorary Secretary then announced the following elections, as the result of the ballots cast in July, August, and September; the term in each instance to date from October 1, 1931:

Representative on the Board of Governors—term 3 years:
G. S. CURRIE

2nd Vice-President—term 2 years:
G. G. GALE

Honorary Secretary—term 2 years:
DR. L. H. MCKIM

Honorary Treasurer—term 2 years:
WALTER A. MERRILL

Executive Committee—term 2 years:
DR. L. C. MONTGOMERY
J. DEG. BEAUBIEN

Council of the Graduates' Society—term 2 years:
COL. R. F. STOCKWELL
MRS. G. C. MCDONALD
DR. C. F. COVERNTON
DR. R. A. H. MACKEEN
MR. D. C. ABBOTT

ELECTION OF GRADUATES' REPRESENTATIVE FELLOWS ON THE CORPORATION OF THE UNIVERSITY

The following representatives were elected by the graduates at large by ballot during the months of July, August and September. The term of each is three years from October 1, 1931:

In Arts:	MR. S. G. DIXON
In Medicine:	DR. D. GRANT CAMPBELL
In Law:	MR. G. B. CLAXTON
In Agriculture:	MR. E. A. MACMAHON

After the election results had been announced, Mr. Jaquays mentioned the fine work accomplished by the retiring officers of the Society and a vote of thanks for their services was passed unanimously. Major D. S. Forbes, Dr. A. N. Jenks, and M. F. MacNaughton were then elected to the Nominating Committee; Messrs. Clarkson, McDonald, Currie and Co. were appointed auditors for the ensuing year; and, there being no further business, the meeting adjourned.

The Montreal Branch

Following the meeting of the Graduates' Society, the annual meeting of the Montreal Branch was held on October 13, 1931, with the President, G. C. Mackinnon, in the chair and approximately 35 members attending.

In the absence of the Honorary Treasurer, the Executive Secretary read the financial report, which showed an excess of revenue over expenditure of $737.73, this sum being transferred to the Parent Society in payment for services rendered by the Graduates' Society's executive officials.

The Executive Secretary then outlined the season's work, referring particularly to the sponsoring by the Branch of a French play and the

series of four Sunday afternoon lectures in Moyse Hall. He referred also to the part taken by the Branch in holding a Graduates' Theatre Night at the first performance of the Red and White Revue; to the successful Graduates'Smoker held last January; to the Branch's part in securing first-class attendance at the 'Varsity-McGill and Harvard-McGill hockey matches; and to the Branch's distribution of tickets for the University Convocation in May.

Reference was also made to the heavy work assumed by the Branch in organizing all entertainments at the Graduates' Reunion in October, work which, it will be admitted, was most successfully performed.

Following the adoption of the Executive Secretary's report, the following members were elected to office for a term of two years: Vice-President, Dr. D. Sclater Lewis; Honorary Secretary, H. B. McLean; Executive Council, Miss E. E. Abbott, J. Cecil McDougall, R. E. Powell, Major D. S. Forbes, and A. T. Galt Durnford; Nominating Committee, Douglas Bremner, H. E. Hershorn, and Dr. R. R. Struthers.

A vote of thanks to retiring officers was then unanimously passed. General discussion of the Branch's work followed and, all business having been satisfactorily completed, the meeting adjourned.

The Quebec Branch

At the annual meeting of the Quebec Branch of the Graduates' Society, on November 11, Oscar Boulanger was elected vice-president and Ken. Carter honorary secretary. W. G. Mitchell remains as president of the branch and A. G. Penny as honorary treasurer. Twenty-two members of the branch attended the Reunion in October.

Canadian Federation of University Women

THE Fifth Triennial Conference of the Canadian Federation of University Women was held late in August at the Chateau Laurier, Ottawa. McGill's representatives were: Mrs. Walter Vaughan, Miss Zerada Slack, Miss Isabel Brittain, Miss Hazel Murchison, Mrs. Gerald Charters, Miss Ruth Harrison, Mrs. A. Turner-Bone, Miss Louisa Fair, Mrs. M. T. Bancroft, Miss Winifred Kydd, from Montreal; Mrs. T. S. McMorran, Mrs. J. E. Craig, and Miss M. McSporran, from Ottawa.

The report of the Scholarship Committee sketched the careers of candidates who had secured the Federation Scholarship in the past decade, mentioning particularly Miss Margaret Cameron (Arts '16, McGill; A. M. Radcliffe; Ph.D. Sorbonne), Miss Dorothea Sharpe, graduate of St. Michael's, Toronto, and Miss Alice Wilson, 1926 holder, whose post in the Geological Survey of Ottawa was held for her while she worked for her Ph.D. degree in Chicago.

The conference empowered the Executive and Scholarship Committee to make a further grant of $500 to the holder of a scholarship within the next 3 years, or to create a second scholarship of $500, should funds warrant the expenditure.

The following officers were elected: President, Mrs. Douglas Thom, Regina; Past President, Miss Laila Scott; Vice-Presidents, Mrs. T. S. McMorran, Miss Laura Newman; Recording Secretary, Miss K. Gillespie; Corresponding Secretary, Mrs. J. Barnett; Treasurer, Mrs. H. I. McEwen; Membership, Mrs. R. H. Stewart; Archives, Mrs. W. M. Sadler; Scholarships, Dr. A. V. Douglas.

The next Triennial Meeting will be held in Edmonton.



Associated Screen News

THE MACDONALD ENGINEERING BUILDING

As a benefactor to McGill, Sir William Macdonald stands unrivalled through the measure of his abounding generosity. An article dealing with his personality and the events of his career will appear in one of the forthcoming issues of *The News*.

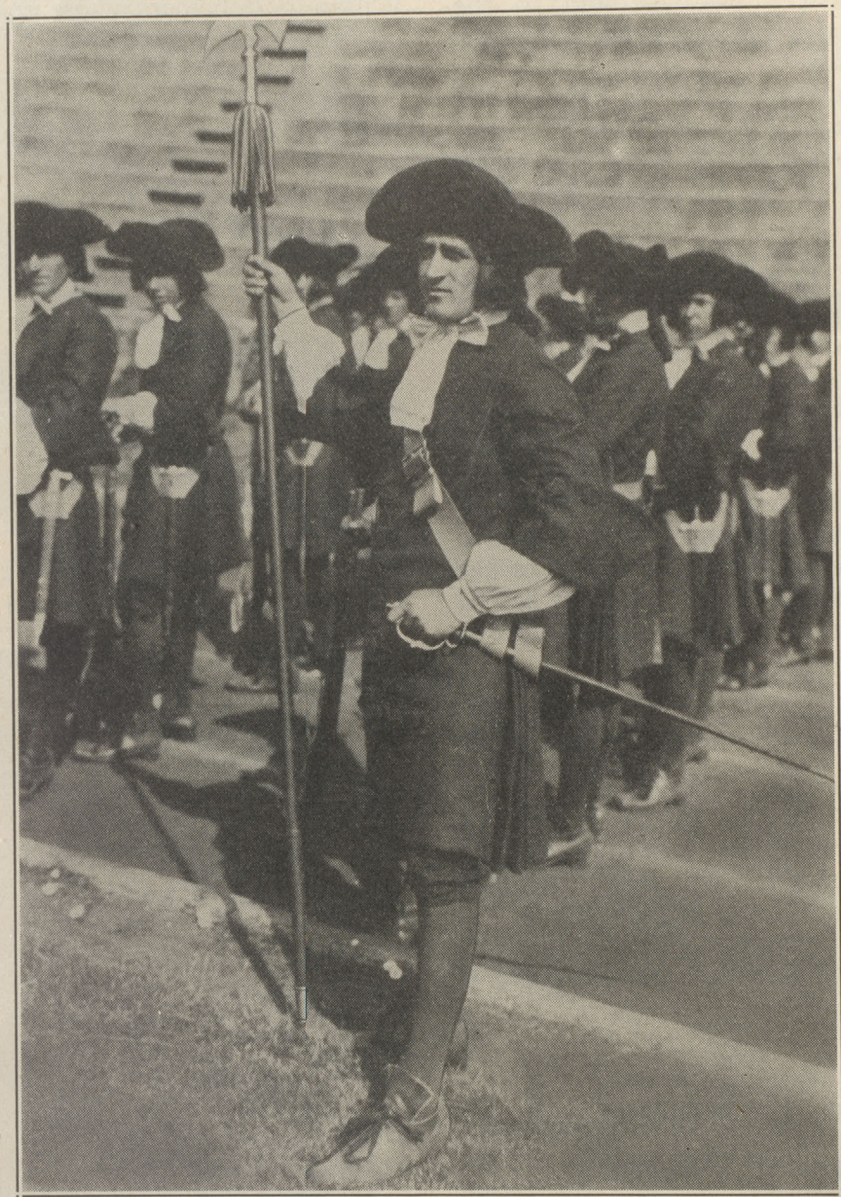


Photo copyright reserved J. Delisle Parker

AN OFFICER OF THE CARIGNANS

No pains were spared by those in charge of the French Colonial Exposition of 1931 to assure correctness in the clothing and equipment of the men representing the first regiment in Canadian military history and the first in the Colonial Army of France.

The Carignan-Salières Regiment

The First Military Organization in Canadian History

By J. DELISLE PARKER

AS great crowds jostle into the Paris International Colonial Exposition this year, they pass in the centre of the square of the Porte Dorée a high column, inscribed with names familiar to every school child in Canada; and with a certain thrill and pride in the glorious past of the Dominion one enters le Musée Permanent, the first building in the exhibition grounds. Here again is matter of great interest to the visitor from overseas, for the first figure in the line of reconstructions of France's Colonial Forces is a life-sized mannequin of a soldier of the Regiment of the Carignan-Salières, the oldest regiment in Canada's military history.

After long centuries, we see at last an accurately reconstructed figure representing a soldier of a corps that played a prominent rôle in the early days of Eastern Canada. The figure is shown with snowshoes and fur cap, as the Carignans probably appeared in the winter campaign against the Iroquois in 1666, and the reconstruction is chiefly due to Monsieur Albert Depréaux, the distinguished military historian. The silent sentry he has constructed recalls a stirring period and a military organization whose record remains of paramount importance, not only to the Colonial Army of France, in which he ranks as the senior member, but in the founding of Canada.

The Carignans were of the period of the Three Musketeers and had in their ranks more than one prototype of that immortal fellowship. Unfortunately for Dumas, the painstaking efforts of those enthusiastic delvers into the past of the historic corps, Sulte, LeRoy, Malchelosse, and others, were not in print in his time, otherwise he might again have thrust the swords of his Musketeers through the legs of history and brought them overseas, for, as the story of the Regiment stands, stripped of the complexities and discussions of historical research, one is often conscious of something in the tale as strange and interesting as fiction.

Back in the days around 1644, when the originals of dashing D'Artagnans abounded in France, a certain Thomas François of Savoy, Prince of Carignan, and ancestor of the present King of Italy, decided to expand his household guards into a regiment and go to the wars. This procedure may seem strange to us, but it must be remembered that it was only at this period that the governments of great nations, England and France, for example, began to organize their armies along modern lines.

Hearing of the revolt of La Fronde against Louis XIII, the gallant Prince marched his Regiment from the scene of a score of fights in Italy and, crossing the snow-capped Alps, joined the French loyalist forces under the great Marshal Turenne. These forces brought the King to the gates of Paris, which was in rebellion, and the Carignans rapidly cut their way into the pages of history under their first gallant commander.

Paris itself became an important battlefield; and, curiously enough, it was in the region between the position of the present Colonial Exposition and the Place de la Bastille, the route of most visitors from the centre of Paris to the exhibition grounds, that the fight occurred. In this area, on a hot day in July, 1652, the Prince of Condé, leader of the revolt against the King, opposed stubbornly the advance of the Regiment, fighting behind every scrap of wall as he fell back through the gardens of the financier, Rambouillet, whose estate ran down to the banks of the Seine.

This fight took place just outside the walls then existing in the Faubourg St. Antoine, and it is not difficult for the overseas visitor to reconstruct its background. This section was then fashionable, and one can still admire many handsome mansions of the period, with rich stone carvings and great courtyards, across whose cobbles rumbled the gilded coaches of the lords and ladies of the past.

It is a strange coincidence that a regiment which was afterwards to see so much rough and wild campaigning, from the wind-swept plains of Hungary to the snow-covered forests of Canada, should have fought one of its hardest battles in an old aristocratic section of Paris. It is highly probable that of the

officers and men of the companies who fought under the Prince on this occasion many landed in Quebec thirteen years later.

To complete the story of the battle of the Faubourg St. Antoine, neither the Carignans nor any of the royalist army got into Paris that eventful July day. Before the gates stood the great fortress of the Bastille, which the Marquis de Lafayette, at the head of the National Guard and a mob, was to storm nearly a century and a half later. On the ramparts of the Bastille were mounted heavy cannon, some of which were fired by no less a person than the Grande Mademoiselle, a rebel lady of high degree, and it was only some months later that Louis XIII and the royalist forces entered the capital in triumph. As a result of the fighting at this time, the Carignans acquired a fine reputation. The princely owner of the regiment had as Mestre de Camp, or active Colonel, a certain Baron de la Val d'Isère. This commanding officer fell in the first attack at the head of his men. Thereafter, until its dissolution, the Regiment he had led was to be classed as a corps d'élite.

In the Ingoldsby Legends, in the poem of the "Black Mousquetaire" we have an interesting, if magnificently jocular, reference to the revolt of La Fronde, its leader Le Grand Condé, and its great opponent Marshal Turenne:

Now it happened just then that Field Marshal Turenne
Was a good deal in want of "some active young men,"
To fill the gaps. Which through sundry mishaps,
Had been made in his ranks by a certain Grand Condé,
A general unrivall'd—at least in his own day—
Whose valour was such, that he did not care much
If he fought with the French,—or the Spaniards,—or Dutch,
A fact which stamped him a rather cool hand,
Being nearly related to Louis le Grand.
It had been all the same if that King had been his brother;
He fought sometimes with one, and sometimes with another;
For War, so exciting, he took such delight in.
He did not care whom he fought, so he was fighting.
And as I've just said, had amused himself then
By tickling the tail of Field-Marshal Turenne.

In the Faubourg St. Antoine, Field-Marshal Turenne with the aid of the Carignans took his turn at tickling.

The next chapter in the Regiment's career opens with a Crusade against the Infidels, in the form of the Turks, who were becoming a distinct European menace. These ferocious warriors of Asiatic origin had a century before crossed into Europe by way of the Dardanelles, captured Constantinople, and pushed north as far as Hungary. Here they changed their route and, starting westward, were already threatening Austria. Louis XIV, now King of France, and his ministers determined to act before the danger approached nearer. Combining in this crusade with the Emperor of Germany, his army of 6,000 men, including the Carignans, met the Crescent banners of the Turks, under Achmet Kouprougli, at Saint Gothard, on the banks of the Raab. The nature of the fight can be judged by the record of an eyewitness, the French general de Coligny, who declares that the river became "a floating cemetery." In this decisive battle of 1664, the Carignans again proclaimed their merits in action. Years later, no doubt, the campaign was often described by grey-haired officers and soldiers to their grandchildren around the fireplaces of their far-off homes in Canada.

A few years previous to the date when this narrative begins, the development of the newspaper had occurred, and a shipping news reporter has passed on to history the following valuable information. It is curious how much this item has of the snap and strict attention to facts demanded in a modern news column. In the *Gazette de France*, the correspondent from La Rochelle on May 15, 1665, writes:

"Depuis quelques jours, il est parti de notre rade sept vaisseaux de la Cie des Indes Occidentales pour les I. de L'Am, et on en prépare encore plusieurs ici, pour le 15 de mois prochain. Hier, il y en arriva 2 du Roy, l'un nommé le *Terron* et l'autre le *Jardin de Hollande*, venant desdites Indes, qui rapportent qu'à leur départ il y en étoit arrivé 12 de la même compagnie.

"On assemble ici 20 Cies du Régiment d'Infanterie de Carignan-Salières qui sont de 1000 hommes dont la conduite a été donnée au Sr. Barbin de Chauney, commissaire des guerres, pour les faire embarquer dans deux jours, et les porter au Canada, où ils doivent combattre les Iroquois. Le Sr. Talon, ci-devant Intendant du Quesnoy, y passera aussi pour la même fonction, ainsi que le Sr. de Courcelles, en qualité de Lieutenant-Général et Commandant, sous le Sr. de Tracy."

Thus clearly and directly to the point this newspaperman in long hair, lace ruffles, and broad-brimmed hat imparts to the public that amid much movement of ships, inward and outward bound, twenty companies of the Carignans, a thousand strong all told, had arrived in the port with orders to proceed at once to Canada to fight the Iroquois. Tracy is mentioned as in charge of the expedition and Courcelles as his second-in-command, with Talon as commissaire. Nothing has since appeared in the French press of more vital interest to Canada, for the coming of the Carignans was to be an event of outstanding import to the struggling colony.

From combats with yellow-skinned Asiatic invaders almost on the borders of Russia to fighting redskins in the wild forests of Canada was the destiny of the Carignans, within the space of approximately a year. Considering the age in which these events occurred, and the fact that the march across Europe and back was made on foot and was followed by the horrors of a sea voyage lasting many weeks, in the crude ships of the 17th century, one can regard these soldiers as stout fellows indeed. Most of the units engaged in the Hungarian campaign had been disbanded, but the Carignans had manifested such worth that Louis XIV and Colbert, an energetic Minister, ambitious for Colonial expansion, had retained them in the service. They passed from the absolute control of the Prince and became a sort of royal corps of marines, or troops for overseas. To the present day, troops of the Armée Coloniale, now consisting of many regiments of all colours, wear an anchor badge on tunics and headgear, in remembrance of the original foundation.

In Canada, the Iroquois had become a menace to Colbert's colonial schemes, and until they had been properly chastised it was evident that no real progress could be made. A contemporary in a letter gives an important insight into the general situation: "Louis XIV, in order to render powerless the Iroquois, who are troubling the establishments, sends in the spring to Canada a fine regiment of infantry. The regiment chosen is that of Carignan, which has just campaigned with brilliancy in Hungary and which is given on this occasion to Henri de Chapelas, Sieur de Salières, Colonel of the Salières Regiment, which is now incorporated with the Carignans."



Monde Illustré, Paris

A SOLDIER OF THE CARIGNANS

This figure, the work of Monsieur Albert Dépreaux, the noted French historian, shows a soldier of the Carignan Regiment in winter kit. As a result of much research, the model is appreciably more accurate than any that has appeared before.

It is evident that the home government was intent upon giving the Iroquois a good drubbing, and it will be briefly shown in the following paragraphs how much of success or failure attended its schemes. The Carignans, who were to do the work, had been slightly reorganized before leaving the old Huguenot seaport of La Rochelle. As mentioned above, a fine old soldier, Sieur de Salières, enters our story at this point. As the Prince of Carignan remained behind, this officer was now in command, and the regiment bore the combined names of Carignan-Salières, but was often referred to for the sake of brevity as the Carignans.

Some historians have tried to introduce another commander at this point, but as any prolonged discussion of this controversy would be irrelevant in an article such as the present, only a few main facts and deductions will be given.

A certain Johan de Balthazar, German by birth, and for twenty years an efficient officer in the French service, is supposed to have been also at La Rochelle with his regiment.

Perhaps some of his men were incorporated in the Carignans. If that is so, it is probable that they were not aliens, though possibly Swiss, for up to the present no German names have been found in connection with the Regiment. Neither is there any reference to Balthazar himself by M. de Salières in his notes. Le Père Daniel refers to the combination, years previously, of the regiment of the Prince de Carignan and that of Balthazar, for a time being known as Carignan-Balthazar, and the fact that Balthazar retired and was replaced by M. de Salières. General Susane, in his classic on the French Infantry, mentions Balthazar at La Rochelle and at once conveniently disposes of him by death. As a matter of fact, there is strong evidence that he resigned from active service and occupied himself with the history of one of his campaigns. Although a man of exceptional intelligence and with a proper share of wanderlust, it is highly probable that neither he nor his men took any part in the Canadian expedition. The regiment arrived at the port one thousand tried veterans strong, and, with possibly a few substitutions made by the new colonel, sailed for the west at the same strength.

The horrors of the voyage of this first French regiment to be sent overseas are now well known. It is difficult for the present generation to appreciate the difficulties that the shipping overseas of the Carignans must have involved. The sending across and bringing back of troops during the Great War has had a tendency to make the transportation across the Atlantic of a thousand men seem a trifling matter. This opinion is modified on reflection that such a journey in the seventeenth century would last not ten days more or less, but, as in the case of one section of the Carignans, nearly two months.

The sympathetic Mère de l'Incarnation gives us some glimpses of the Regiment and of the tragedies of a trans-Atlantic voyage of that period: "All these vessels have arrived and have brought over to us the rest of the army with the important personages the King has sent to aid the country. They thought they were all going to die on account of the tempests which held them back for months. On approaching land, impatient with such a long sea journey, they opened the port-holes, which caused the fresh air to enter too soon and caused sickness (probably pneumonia), which wreaked much havoc. First there died twenty and one hundred, and thirty have had to be put into hospital. The hospital is filled to overflowing and use has had to be made of the neighbouring houses, all of which has extremely worn out the nuns, but excellently increased their merit."

A little côterie of officials, including a new governor-general, M. de Courcelles; the Intendant, Jean Talon; and the Viceroy, an old soldier, named Marquis de Tracy, who came by way of the West Indies, arrived first and began their work. Colonel de Salières announced his own arrival shortly after that of these dignitaries, whose lack of common sense and military skill were considerably to irritate him later. In his journal he writes, directly and with charming simplicity:

"I arrived at Kebeck this August 17, 1665, at 10 in the evening, with eight companies, on two ships of about 400 tons each." That is to say, each ship would measure about 150 feet in length and would mount fourteen guns on the two sides of its lower deck. In other words, they were craft of considerable size for the period. The hygienic conditions were most likely appalling and probably accounted for the fact that from the highest to the lowest everyone on board had attacks of fever. In the few words of the Colonel, one grasps the picture of his arrival, with the dim silhouette of the noble mass of Quebec looming against the evening sky, the lanterns, and the cheers of the men on shore to their travel-worn comrades, the husky, sharp orders of the skipper, and the noise of the anchor chains, all heralding the new chapter in history that was about to open.

This year of 1665 was indeed to be a memorable one for Canada, for besides troops there came new colonist families, numbering about 600 souls, also cattle, and the first horses to be used for breeding purposes in Canada. The population was suddenly doubled; and forts were constructed and rebuilt along the Richelieu, so that the favourite waterway of the attacking Iroquois war parties had, like the Rhine, its watch, ever vigilant and prepared for all eventualities.

The turbulent redskins received warning from all these arrivals that retribution for their past misdeeds was at hand. Two days after his arrival, Marquis de Tracy passed the first contingent in review at Quebec with

much pomp and ceremony. He took care to see that some Iroquois spectators were included among the admiring crowd. The beating of drums, waving of flags, and volley firing were not only to hearten the colonists, but were designed to put dismay into the hearts of such redskin foes as were in town, who would naturally in due course report the proceedings to those gathered around their campfires in the forests. A month later some dozen horses arrived, to contribute still further to the needs of the colony and to this business of astonishing the natives. Only one horse had hitherto been seen on Canadian soil. He had rejoiced in the title of "The Lone Horse" (le cheval solitaire).

In regard to this review, it may be noted that the Carignans were among the first troops to wear a uniform. Previous to this, the soldier's military equipment alone distinguished him from the civilian, the military dress of the period otherwise depending upon the caprice of the individual or that of his officers. A few corps d'élite, such as the King's Musketeers, had a certain uniform, but the Carignans, although a regiment of the line, had become a picked corps of veterans with which the authorities could experiment. The official army records show that they carried rifles and a kind of bayonet. This pike on the end of the gun resembled a dagger, and was jammed into the muzzle, which fact prevented any firing until the bayonet was removed. Some brilliant mind in Paris apparently thought that the Iroquois would stand still, as troops might do on a European battlefield, while the infantry charged with the steel.

The Regiment was soberly dressed, in brown cloth, grey stockings, and a low, broad, black hat with trimmings. In the winter campaign, various articles were substituted or added, such as more suitable headgear for the woods, perhaps an Indian ceinture-fleché under the belt, leggings, and moccasins for snowshoes. As already stated, the figure in the Musée Permanent des Colonies is dressed in this winter equipment. The detachment that represented the Carignans and marched at the head of the column through Paris this summer in the reconstruction of the various Colonial regiments of the past, wore the full-dress uniform. It was the first time the correct uniform has been shown and, curiously enough, it was worn by present members of the Colonial Army, marching over the Carignans' old battlefield in the Faubourg St. Antoine. Some extraordinary occasion was required to bring to an end the absurdities in illustrations, pageants, and historical exhibitions that have masqueraded



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J. Delisle Parker

IN FULL DRESS

This photograph, taken by special permission of the French Government, shows how the Carignans appeared on formal occasions. The men in the group are soldiers of the French Colonial Army, taking part in the Colonial Exposition of 1931 in Paris.

as the Carignan-Salières in the past. This the Paris Colonial Exposition has accomplished.

It may be added that the captains of the Regiment, indeed all the officers, carried swords and cavalry pistols in addition to a pike. The subalterns carried a musket, or rifle; and drums furnished the music.

Thus the Marquis de Tracy landed his forces in Canada, and immediately proceeded to impress the Five Nations with the importance of His Majesty of France. To go into detail in regard to his various expeditions against the enemy is beyond the scope of this article. No doubt the final success was less than it might have been if the impetuous nature of this old soldier had permitted more thoughtful preparation. Tracy proceeded with great energy from the time he landed. Hardly having had time to lose their sea legs, the first contingent was sent off on field service. La Mère de l'Incarnation again displays her keen observation: "The companies who have arrived in Quebec have already left with a hundred French of this country and a large number of savages, as scouts, to gain possession of Iroquois River (Three Rivers). They are making here a great many little or large flat-bottomed boats to pass the rapids. Provisions and war munitions are all ready, the King paying for all." Fort Richelieu, now Sorel, was the result of this expedition, and the presence of the Carignans enormously impressed a trading party of a hundred Iroquois canoes from Lake Superior.

This expedition is typical of the plan used to intimidate the Iroquois. Using Quebec and Montreal as bases, with the various forts that had been garrisoned here and there, expeditions sallied forth, summer and winter, in varying strength. There was probably no intention of ever attempting the complete conquest of the enemy. The Canadian militiamen, coureurs-de-bois, and Algonquin allies could give ample details of the numbers, cunning, and courage of the dusky foes in the forests, and one may conjecture that the main efforts of the Viceroy and his aides was to hold the enemy in check and establish the prestige of France. The Five Nations, it must be remembered, could easily put into the field over two thousand warriors, all magnificent athletes and woodsmen.

The Agniers, or Mohawks, were the most bitter enemy of the French and had their villages only a few hundred miles away. Years later, a Governor-General despairingly compares the devastating Iroquois to a great band of wolves, who could only be tracked to their lairs in the forest with blood-hounds, or by other Indians, who could not always be depended upon.

In brief, the problem before the King's officials and the Carignans, who had been sent to do the work, was immense, and was intensified by lack of imagination and knowledge on the part of authorities at home. The campaigns in the Canadian woods in the 17th century, in the Transvaal and Soudan in the 19th, and more recently in the Dardanelles in the Great War all seem to have a family connection in this respect. Quick and brilliant success was demanded in each instance, without a realization of the heavy cost involved. This accounts, perhaps, for the foolhardiness of De Tracy and Courcelles in undertaking a campaign extending into the winter only six months after the landing of a European-trained regiment. Colonel Salières' advice was asked, which was not always the case, it seems, and the game old veteran answered that the idea was "grande et belle," provided proper preparations were made, and in this remark he touched the vital error of his chiefs.

The long-suffering Carignans patiently followed the excitable and reckless Governor through the woods, beating their drums, and burning a few empty villages. On November 5, they re-entered Quebec amid great rejoicing. They left behind them in the wilderness two hundred and fifty of their comrades, dead through disease, privation, and needless suffering.

In the next expedition, the Canadian militia was called upon to give all possible assistance. The Montreal volunteers in their long blue coats, with cap and sash of the same colour, "les soldats de la Sainte Famille de Jesus, Marie, et Joseph," promptly responded. Likewise, the white uniforms of Three Rivers and the red of Quebec, all capable of fighting the redskins on their own terms. Among the officers and men are names ever memorable to Canadians—Repentigny, Lotbinière (the witty but tragic poet of the expedition), La Vallière, Lemoine, Saint André, Chartier, and the rest of the élite were in the columns that left early in January, 1666, to further punish the Iroquois.

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The Oxford Expedition to Akpatok Island

August - October, 1931

By ALFRED LANGLEY, B.Sc. '26

WE have just arrived in St. John's, Newfoundland, and, after an interval of a couple of months, I must admit that the first hot bath is not only a great necessity, but also a great pleasure. The wide open spaces have many advantages over civilization, but they have not yet acquired a monopoly of everything that is attractive.

After the pleasures of the hot bath, and after shaving off a fearsome looking beard—two events which I consider mark the definite ending of our expedition—I hasten to write these lines, lest the twisted story of our doings published by the Newfoundland press filter through to the outside world. The Expedition has sent detailed news only to the London *Times* and from the restrained but correct account appearing there other newspapers have made what stories they wished. The point is that the true account has been printed first. A consequence of this policy here in St. John's is that local reporters, annoyed at receiving only the bare facts of our trip, have endeavoured to amplify these with gleanings picked up about the docks.

The whole truth is that we have had the bad luck—the one and only piece of bad luck—to lose a man. This created a sensation and sensation to a newspaper man is more attractive, to use a local metaphor, than squid to a cod.

I suppose one could make a good saga out of the cruise of the *Young Harp* and the adventures of the Expedition, small though they be compared with the greater epics of humanity. Two thousand miles, mostly through uncharted waters, in a tiny schooner (she is about twenty-five paces long), is in itself an unusual experience and, added to that, the account of a month spent on an unknown island, shunned even by the Eskimo, could, I feel, be written up by any journalist in a way that would make the mouths of the most hardened reader of the tabloid press open a trifle wider. But I am not a journalist, in fact I suppose I belong to an opposing type of mentality, so instead of a lurid description of weather conditions, I merely record in the meteorological log:—*Wind. 18 Temp.—10°F. Precipitation S.*, which, as anybody with a grain of common sense will admit, does not give to the average individual anything like so good an idea of awful weather as a less restrained description.

We had a first-class trip north, with beautiful weather and warm, favourable winds. Hamilton Inlet passed, the scenery was magnificent. By sea there were always icebergs to enhance the pale blue of the waters of the Arctic current; by land, fine snow-capped mountains, falling sheer to the water in a wonderful medley of cape and fiord, offered at every mile a good harbour to any ship by storm beset.

We stopped for a day at Port Burwell, a minute settlement just on the Canadian side of Cape Chidley. Here we had our first meeting with the Eskimo, the Hudson's Bay Company, and the Royal Canadian Mounted Police. From there we proceeded to Akpatok, the "place of Guillemots." We circumnavigated the island and lopped miles off the dotted outline on the chart. I supervised a "running survey," which gave us our first reasonable map.

The next day we landed, a ticklish business, as there is not a harbour along the rugged coast of the island, so we were forced to land ourselves and our equipment on an exposed and open beach. We managed it successfully and skilfully dodged a storm. That was really hard work. The ship then sailed away to trade for the H.B.C., and we were left, cut off from civilization, until she should return.

In the event of her being wrecked in the interval, the H.B.C. had promised to try to get to us, but, as a precaution, we had provisions for the winter.

The evening after we landed, a polar bear came sniffing at the camp. Perhaps he was the king of Akpatok. If so, poor chap, he was soon dethroned and his subjects, during the remainder of our stay, growled or yawned at us from a distance, causing us no annoyance, except the necessity of carrying a rifle whenever one went for a walk. There were about a dozen bears on the island, which is about thirty miles long and twenty miles wide, and we met them often. Our photographer, accompanied by someone with a gun, obtained some good closeups of a male bear, who was caught napping in the sunshine. A certain female, who had two cubs, we carefully avoided, and did not let our imaginations dwell too much upon her existence when we were out on night-time trecks.

Akpatok is a huge slab of limestone, 700 feet high on the average and nearly a thousand feet in places, bordered for the most part by vertical and impressive cliffs. Deep and steep ravines run down to the sea from the interior.

I will spare you a detailed description of the mass of information gleaned by our Geologist, Entomologist, Ornithologist, Biologist, Botanist, Surveyor, Meteorologist, Oceangrapher, and Hydrographer (the last three being united in myself, which, by the way, grew a little larger during the trip, as I put on a stone in weight, and this will give you an indication of how much I enjoyed myself).

We had glorious weather most of the time; much more sunshine than in England or in Newfoundland. The interest of treading unknown country, mapping unmapped regions, tracing the rise and flow of little known tides, and living under canvas in an entirely cut-off and self-contained group of interesting men, was sustained and every day renewed.

Towards the end of our stay, the fine weather left us and grey skies, fogs, and high cold winds became the order of the day. Our work by this time was nearly completed. The geologist's boxes of rock and fossil were nearly full; many cases of bottles, containing zoological and botanical specimens were stacked in the store tent; a case of birds' skins was zealously guarded by the Ornithologist; and the map of the island lacked only a small area in the northwest corner.

The southern camp had been withdrawn before this and a northern camp established. This northern camp was merely an outpost, consisting of an Arctic tent, provisions, Primus stove, and sleeping bags for two men. It was only 7 miles from the base camp, but those seven miles took three hours to cover and absorbed the energy of a fifteen-mile walk in normal country. Similarly, from the north camp, the north point of the island lay not more than ten miles away, but the ten untrodden miles contained an unknown number of ravines, necessitating a carefully steered compass course to negotiate in thick weather.

As previously mentioned, only two men at a time could live at the outpost camp. In turn, the various 'ologists and the surveyor visited it in order to complete their particular surveys of the region. The Ornithologist and the Botanist were there together, both young but competent men. The Ornithologist had taken his degree at Oxford and the Botanist, who was in his final year, had already had a great variety of field experience. He had collected in Lapland and had even penetrated as far north as the Murman Coast in the guise of a seaman on board a Norwegian tramp. On their first trip to the North Coast at Akpatok these two were caught in a blizzard, which, without exaggeration, was a bad storm. A freezing wind blew at sixty miles an hour carrying snow, but no snow lay on top of the island, as it was whirled clean off that 800 ft. high plateau and out over the grim cliffs into the wild sea of Ungava Bay.

From the north coast the two men started back to their camp, purposely pitched by a conspicuous hill to render it easy to find. But a conspicuous hill ten miles away is of little use when visibility is only ten yards. They steered a compass course through the howling gale. It grew dark. I know little enough of the story, but I can well imagine the situation. The terrain is exceedingly difficult to walk over. Sharp scree, hillock tundra, water-logged patches, and ever and again the painful four or five hundred foot descent into a ravine, followed by the arduous climb out of it. Then bad luck. The entomologist had a bad fall into a gully, and was severely shaken. What is worse, perhaps, the only compass they possessed was lost in the fall. No use now to try to find the north camp; they must either weather out the storm in what shelter they can find, or follow the coast back to the base. They chose the latter alternative. All through that night of fury they struggled on, never really knowing



MAP SHOWING THE POSITION OF AKPATOK ISLAND

how far they had gone, or how far they still had to go. And all the time the blizzard was cutting them to bits. Finally the entomologist said that he would shelter; he found, I expect, that he was a bit bruised by his fall. "You go on to the base camp and tell them where I am." A bitter dawn could be sensed at this time by a slight lightening of the pitch darkness.

At 8 o'clock in the morning the Botanist crawled into camp, boots in shreds, hands and face frostbitten, scarcely able to speak coherently. Three of the "old men" are in the mess tent—the Leader, the Army, and the Navy. We are a little surprised to see the Botanist, but he is a man who walks incredible distances at all times of the day or night. In the dimness of the tent, we do not at first notice his plight. We think that he has just strolled in from the north camp for breakfast. I am changing the records of the meteorological instruments, the Chief and the General are preparing breakfast. (It sounds a little late but we keep two hours summer time and it is only 6 o'clock by the sun; in this way we make use of every minute of daylight.)

Suddenly it flashes upon us that something is wrong. We notice everything at once. A gulp of rum is poured down the newcomer's throat, questions are poured into his ears. Haltingly he tries to tell us where the other man is. He is near? Yes. There? No. There? Yes. In this ravine? In that ravine? The poor chap is almost unconscious. He droops. We force more details out of him. We allow for his exhaustion. If he says that the other man is near, he is probably very near. A quarter of a mile to a collapsing man is a long way. With little preparation, therefore, the three of us run off. The blizzard has abated

a little, but still goes through us like a knife. At times, however, the snow ceases. We advance in line abreast, further and further afield. A needle in a haystack, I think to myself, and the leader thinks likewise. Shall we go on, or return and revive the Botanist sufficiently to obtain more precise directions? We go on for another quarter of a mile, then swing to the westward and southward back towards camp. We are on the point of returning when a man starts to run. He waves to us. Shouting in this wind is useless. We run. There he is. . .

Details do not assist. He is delirious. We wrap him in our coats, force rum between his teeth, chafe him, and protect him from the weather. Three of us stand by while two run back to camp. He is a big heavy man; useless to try to carry him over this country without a stretcher. It seems hours before the camp party arrives, yet the camp is only a mile and a half away, and the interval is barely an hour and a half.

Wrapped in dry, warm clothes inside a sleeping bag, the unconscious man is soon upon the improvised stretcher of ground sheet and oars. He breathes evenly and seems warmer. We start for home.

That one and a half miles took six men more than two hours to cover. Our efforts, alas, are of no avail. Unknown to us, as we stumble through the blizzard over the last half mile to camp, our comrade's sleep turns at last from earth to heaven.

Afterwards our work went on. More sombrely at first—the gap in the ranks is so conspicuous—more soberly, too, on the part of the younger men, who up to that time had hardly realized the risks they ran and had been inclined to regard as unnecessary the precautions taken by the older hands. Our time on the island runs out. We prepare for the return of the schooner. An open beach in Ungava Bay at the end of September must not be trifled with; if the schooner arrives and an opportunity to embark occurs, that opportunity must be seized. And seized it was. It blew a gale while we were embarking, but luckily it blew offshore. In small, dancing dories everything and everybody was safely put aboard our faithful ship.

The next day we fled before the storm to Burwell. Nearly all of us were seasick; even our bosun and our cook, seasoned Newfoundland fishermen, were not too well.

From Burwell we had a splendid voyage south. Cape Chidley was passed by the light of a haloed moon and the Torngat Mountains were left astern by noon the following day. Then we started to play hop-scotch with the gales. A shelter in Nullataktok Bay; a dash to Hebron; another dash to Cut Throat Tickle, where we arrived with a heavy sea on our tail. The next sortie was to Fords Harbour, the next to Gready, the next to St. Anthony, in the north corner of Newfoundland. All these harbours were interesting, all were different. Eskimos, Moravian missionaries, H.B.C. men, and fishermen would come aboard and talk, drink our rum, smoke our cigarettes, and entertain us similarily ashore—and the candles in the empty bottles would burn low before our talks were ended.

Yesterday, at 1 o'clock in the morning, we arrived at St. John's. Already it seems a year ago. I am wearing a collar and tie and have just come from eating the first meal for a couple of months that was not prepared by one of ourselves. The gap between the Newfoundland Hotel on August 5 and the same hotel on October 5 has closed and civilization has enfolded us again. The beauty of the Arctic landscape is now a memory. Icebergs still drift aimlessly in the tides of Ungava Bay; and breakers still challenge the mighty cliffs of Akpatok. On a sunny day, the pale blues and greens of the northern sky are still reflected in the cool waters of the Arctic sea, and, on land, the cotton grass nods by the lake sides and the saxifrage and dryas stretch themselves for a last time before their long sleep in the Arctic winter.

The results of our Expedition will, I consider, be good. The Hudson Straits are not a great highway yet, but a great future lies almost undoubtedly before them. At present astonishingly little is known of these Straits. The charts are poor, meteorological and hydrological facts are scanty, and aids to navigation consist of three direction-finding stations, nothing more. We, at least, have placed an island lying near this route precisely on the map; and have made accurate records of the movements of the sea and air about the island and of the structure and potentialities of the island itself. And all this work has been done without losing sight of one of the principal aims of the Oxford Exploration Club—the training in field work of the coming scientist.

James Douglas, a Benefactor of McGill

By W. B. HOWELL, Med., '96.

IN the days when medical students and doctors who wished to study anatomy had to avail themselves of the services of "resurrectionists" or to have recourse to their methods, a young Scotchman named Douglas settled down in Utica, New York, to practise medicine. Not long afterwards, he inadvertently left the door of his private dissecting room unlocked and returned, after a short absence, to find a neighbour gazing mournfully at the body of a prominent citizen who had recently died and been buried. A little reflection and the recollection of a previous similar experience convinced Douglas that his most prudent course would be to cross the border into Canada; and he did so without undue loss of time.

He found his way to the city of Quebec, where he settled down and lived a long and honourable career as a surgeon, teacher of surgery, and alienist. He married twice. James, the subject of this sketch, was the son of his second wife, and was born at Quebec in 1837. He was still living at the time of the Great War, a vigourous old man whose memories of his boyhood made him an interesting link with the past. He could remember helping to burn Lord Elgin in effigy at the time of the excitement over the Rebellion Losses Bill. He remembered going on board the first ocean steamer to arrive at Quebec, and gazing with admiration at the painted panels in the saloon. As a boy he had gone to church to hear Gavazzi preach. An uproar had broken out and he and his mother had been unceremoniously bundled under the seat of the pew before his father sallied forth to take a hand in the fray. Young Douglas could not have remained long out of sight, for in later years he wrote a singularly graphic account of Gavazzi beating off his assailants with the pulpit stool which he held, grasped by the legs. At the age of eleven he went to a private boarding school at Christieville, now Iberville, opposite St. John's, P.Q. He made the journey from Quebec by boat as far as Laprairie, and then by the Champlain and St. Lawrence Railroad to St. John's. This was the first Canadian railway, and, until the year before, had been the only one.

The school at Christieville was kept by a grim old German clergyman, who in moments of exasperation used to drag his pupils about by the hair, and then show his remorse by kissing them. Long afterwards Douglas wrote, "One has very kindly recollections of the tow-coloured hairy old German, despite the wigging, hair-pulling, and kissing. He fed us sumptuously, did not overwork us, and protected us from evil companionships, except our own, by scrupulously preventing our exchanging a word with any boy or girl."

James Douglas's education did not err on the side of narrowness. Even as a young boy he studied anatomy in the private dissecting room which his father, undeterred by his experience in Utica, maintained for the benefit of his apprentices and his colleagues. Not the least part of his education was travelling. His father took him at the age of fifteen to Europe and Egypt, and, two years later, to the World's Fair at New York. The first part of the journey to New York was by sleigh, as the nearest railway was at Richmond, P.Q., a distance of nearly one hundred and fifty miles. Next year James Douglas, with his mother and brother, was at the Paris Exposition, and saw the Empress Eugenie at the zenith of her career.

Thereafter he studied Latin, Greek, and German at Halle in Germany, and then went to Edinburgh to attend the University, where he was for a while the pupil of John Stuart Blackie. It is easy to believe that Blackie's influence was responsible, in part, at all events, for the broad sympathies and the keen intellectual interests which characterized Douglas during his mature life. Owing to his mother's illness in 1856, instead of returning to Edinburgh, he went to Queen's College, Kingston, Ontario, to continue his education. He graduated there in 1858. The next two years were spent in Edinburgh studying divinity. It was his intention to become a

minister in the Established Church of Scotland. He was licensed to preach, and actually did so for a short time, but as he could not conscientiously sign the confession of faith he gave up all thoughts of the church as a profession.

For some years before this, his father had limited his professional work to the care of the insane. In 1845 he, with his two partners, Dr. Morrin and Dr. Fremont, had made a contract with the government to care for the insane of the province. To these three men belongs the credit of introducing into the Province of Quebec humane methods of treating patients afflicted with mental disease. Previously, such patients had been shut up in separate cells, with a minimum of light and ventilation, where, in rags and filth, they were left to brood over their fancies till they became maniacal or idiotic.

Young Douglas, on his return from Edinburgh, found it necessary to relieve his father of his work at the Quebec Lunatic Asylum, and for a considerable time he acted as superintendent there. He looked forward to being his father's partner and successor at the Asylum; and to qualify himself for the work, he studied medicine at Laval University, Quebec City. Before he could finish his course, however, circumstances compelled Dr.Douglas to sell his share in the Asylum, and James, greatly to his regret, had to give up the care of the insane.

Dr. Douglas had invested his savings in unprofitable copper mining operations, and his son now set to work to retrieve something from the wreck of his father's fortune. To this end he studied metallurgy, chemistry, and geology. Curiously enough, his father some years before, when discussing the choice of a career for his son, had expressed the opinion that he was too much of a fool to be an engineer! He seems to have thought that the profession of medicine was more within the range of his son's abilities.

Now began for James Douglas a fight with poverty which lasted over twenty years. He was married and had assumed the care of his father, who was no longer able to earn money. It was at this time that he formed a friendship with Thomas Sterry Hunt, which had within it the germ of all the success that afterwards came to Douglas. Hunt, who was the inventor of the "greenback," was professor of chemistry at Laval University in the city of Quebec. The two friends invented a process of treating copper ore. The patent was the source of only a limited revenue, but it brought Douglas to the notice of mining engineers. He added to his very modest income by giving evening lectures at Morrin College. Now and then he earned money by writing articles for journals.

In 1875 he went, with his wife, his children and his father to Phoenixville, Pennsylvania, to take the position of superintendent of the Chemical Copper Company. It was a small business which had been started with insufficient capital. Douglas fought gallantly for eight years to keep it going, but in the end he was beaten, and the works had to close down. These were lean years, yet Douglas, although so pressed for money that he could not afford to keep up his membership in the American Institute of Mining Engineers, managed to give his children a good education.

When the failure took place, he was a man of forty-five, with a family of eight. His financial position had been little improved by his years of struggling. But the time had not been wasted. He had applied his mind assiduously to learning everything which bore upon his profession, had acquired a profound knowledge of geology and metallurgy, and was beginning to be recognized, through his writings, as an authority upon copper mining. His services were becoming more and more in demand to report upon mining properties, not only in different parts of the United States, but abroad. One of these missions took him to Chili. About the same time, the Chinese government offered him $7,000, a sum which must have seemed like a fortune to him then, to report on a mine in the interior of China, but he refused.

In December, 1880, he went to Arizona for Messrs. Silliman, Lenig and Logan, of Philadelphia. It was a parched and dusty country through which he travelled, much of the way in rumbling, jolting stage coaches. The Apache Indians were still a power in the land, and kept up a desultory warfare with the United States troops. A stage coach was attacked and the passengers murdered almost within gunshot of Fort Cumming, only a few days after Douglas had spent a night there.

In the course of his trip he became aware of the existence of immensely rich deposits of copper. He arrived finally at Bisbee, a small town where there was a mine called the "Copper Queen." The adjoining claim, which

was known as the "Atlanta," had not been developed. Douglas had been commissioned to report upon this to Messrs. Phelps, Dodge and Company, of New York. Though there was no sign upon the surface, he was convinced, from what he found about the "Copper Queen," that the ore deposit of the latter must extend into the "Atlanta." At his recommendation, Phelps, Dodge and Company bought the "Atlanta." The result justified Douglas's opinion. Ore was found in large amount, and in 1885, the "Copper Queen" having also been acquired by the Phelps, Dodge Company, the two properties were consolidated under the name of the "Copper Queen Consolidated Mining Company." Douglas was made manager and given an interest in the business.

The lean years were at an end, and he went on now from one success to another. Under his judicious care the business thrived. New properties were acquired and a railway built to connect Bisbee with the town of Fairbanks on the Southern Pacific Railway. Later, this branch was extended to El Paso, and branch lines were built into Mexico. In the course of time Douglas became president of Messrs. Phelps, Dodge and Company and responsible for the administration of mines, which together produced one hundred million pounds of copper a year—a twelfth of the world's annual supply. He had become one of the great captains of industry and had amassed a large fortune.

But prosperity and wealth did not change his outlook on life. Hating ostentation, he continued to live simply and used his money as if he felt that he held it in trust for the benefit of others. He gave large sums to universities and hospitals—

For his bounty
There was no winter in it.

To his alma mater at Kingston he gave in all $250,000. It was, perhaps, the recollection of his experiences when he worked among the insane at Quebec which influenced him to become one of the benefactors of the Protestant Hospital for the Insane at Verdun, P.Q., for he added to the grounds of that institution land which cost $42,000. McGill University, though it had no special claim to him, received from him in all $312,990. In the Medical Faculty, his name is remembered in the Douglas Research Fellowship in Pathology, to found which he gave $25,000. After his daughter, Naomi, died of cancer in 1910, Douglas set himself, with characteristic thoroughness, to find out what was being done in cancer research. As a result of his influence and generosity, the Memorial Hospital in New York was affiliated with the Cornell University Medical School, and its activities confined to the study and treatment of cancer. He gave the hospital $400,000 and four grams of radium, besides the money to build the Douglas Laboratory there. In 1913 he travelled in Europe with Professor Ewing, the pathologist, and visited the principal medical centres where cancer research was being conducted. In London he contributed liberally to Guy's Hospital and to the Radium Institute.

The basis of James Douglas's character was a blend of the Roman qualities—"*pietas*, *gravitas*, *simplicitas*, *magnanimitas*," yet he had a lighter side. He was a charming companion because of his keen sense of humour and his gifts as a conversationalist. His success was due to his possessing intellectual gifts which are not usually found in combination. He was both a man of science and a man of affairs. His modesty made him disclaim any title to being called a scientist, because he had no education in the higher mathematics. The term he applied to himself was "unscientific technologist." He would not even call himself an engineer, though in his own special branch of mining he was one of the greatest authorities of his time. His insight into human nature, his sympathy, his straightforwardness, his simple dignity, and his kindliness gave him his power to manage men. Because of his kindness of heart he was a better manager than superintendent. The failure at Phoenixville was partly due to his overpaying the employees. It was always easier for him to do the work of an incompetent foreman than to discharge him. He inspired loyalty in his subordinate officials by consulting them, encouraging them to assume responsibility, and trusting them. He had little trouble with labour unions because of his reputation for fair dealing, and because the miners knew how deeply and unselfishly he was interested in their welfare. Douglas set the example of organizing efficient medical services in mines. He built hospitals, and staffed them with competent doctors and nurses. He instituted libraries for the miners and arranged for classes at which

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Extension Work at Columbia University

By MARGARET BARNARD PICKEL

NOTE:—In view of the widespread discussion aroused by Dr. Abraham Flexner's recent book, "Universities—American, English, German," in which he vigorously censures universities for engaging in Extension and Home Study work, the viewpoint expressed in the following article by a McGill graduate actively associated with such work is of more than usual interest.

STUDENTS of the seventeenth century like to think of that period as the cradle of modern freedom, and this applies not only to religion and politics, but to education as well. In those troubled times, men's hope lay, as it must ever, in education, and we find Milton in one of the prose tracts suggesting that:

"More public foundations [colleges] may be so instituted as the youth therein may be at once brought up to a competence of learning and to an honest trade; and the hours of teaching so ordered as their studie may be no hindrance to their labour or other calling."

The problems of education in a democracy must embrace provision for the underprivileged, who cannot afford to give their full time to education, and for mature people for whom formal, undergraduate education would be unsuited and impracticable. Columbia University realized this, when, in 1910, after some beginnings had already been made at Teachers' College, it undertook Extension teaching as a department of the University. The statute which then defined it as "instruction given by university officers and under the administrative supervision and control of the university, either away from the university buildings or at the university, for the benefit of students not able to attend the regular courses of instruction" has made possible a development of extraordinary interest and value.

Following the principle on which it was founded, the Extension department has organized university classes in the late afternoon and evening. While the primary object of the work is not for credit towards degrees, such courses are given by the university departments concerned and are in every case of university standing and regularity. In them are to be found students who plan to enter the professional schools, who intend eventually to apply them towards the degree of B.S. in general studies, and who wish to secure advance credit, which can be applied whenever they are able to give full time attendance at Columbia College or Barnard. There is a particular quality in these students. Hardworking, purposeful, self-reliant, unconcerned with the distracting complications of "collegiate" activities, they do serious and sometimes brilliant work.

Useful as all this is, the great interest of Extension teaching lies in giving opportunity to those who have no need or desire for academic credit. It is here that it justifies itself as a means of adult education. Dr. Woodbridge, for many years Dean of Graduate Studies, said, in speaking of such a function for a university: "The university should be a place to which resort not only those who seek degrees, but also those who seek enlightenment, encouragement, and inspiration. Here should be found the youngsters who need instruction, the men and women of society, those busied with affairs, the writer, the publicist, the statesman, the men of the professions, the inquisitive wanderer who may find in the university the best which its organized effort in pursuit of the best can afford. With such a clientele the university would be stimulated to achieve what it never can achieve simply by helping the immature to secure a degree." For twenty years Columbia has welcomed such students of maturity and experience, admitting them to advanced courses without asking

them to fulfil requirements of examinations and credit counts.

The variety of courses offered is amazing. Many are practical; there are, for instance, special courses in English for foreigners, in business and in banking. But most of them, interestingly enough, for the growth of the enterprise has been largely conditioned by the interests of the students, are educational and cultural. We find a fine department of oriental studies, a solid and growing interest in history and economics, and courses in Anglo-Saxon and Mediæval romances, which, though graduate courses in the department of English, are open to qualified extension students. It might surprise critics, who complain of the utilitarian basis of modern educational demands and offerings, to discover classes in Homer, Topography and Monuments of Attica and Athens, and in Classical Chinese.

English has been from the beginning, and remains, the most popular subject. In addition to sound courses of undergraduate rank and special opportunities for advanced work, Extension has built up a department of writing, which is fostering and developing capable work. Special courses in the technique of the short story, in playwriting, and in other forms help amazingly to shorten the period of floundering and misdirected effort of the person who has some gift for writing but needs guidance and criticism for its development. That these courses are useful is proved by the volume *Copy* which reprints each year the work of students which has been accepted by editors and has already appeared in print. The old superstition that while a man needed a teacher of music, painting, or sculpture, no one could possibly help him to learn to write has been dissipated.

Still another function of Extension education is performed by the Institute of Arts and Sciences, a development of the lyceum system which was organized in 1913. Here, in addition to short series of lectures on literature, psychology, history, etc., are offered single lectures by distinguished men in various fields, scientists, travellers, authors and critics. Concerts, recitals, and plays are given, as well as special programmes for children.

Extra-mural work is conducted by means of classes in various points about New York, classes which cover the same ground as corresponding ones in the university and are taught by university instructors. From one of these centres in Brooklyn, in which was organized pre-professional training for the Long Island College Hospital and the Brooklyn Law School, has grown the Seth Low Junior College. The School of Tropical Medicine in Porto Rico owes its beginnings to post-graduate courses in medicine conducted by university Extension in co-operation with the College of Physicians and Surgeons.

The Home Study department was founded in 1919 for the benefit of those who cannot attend classes at the university or at any of the extra-mural centres. Although Columbia has never given college credit for this work, each course offered there must have the approval of the department of the university which is concerned with the teaching of that subject in the university as a whole, and the work is kept well up to standard. Because of the peculiar problems and difficulties of carrying on instruction by correspondence, the presentation of the material is specially adapted for the use of the solitary student who must work without the stimulation of the classroom. Here again are to be found an amazing variety of students, from every continent and calling. In one year, more than 500 of those registered held degrees beyond the B.A., over 700 were professional men and women, a large percentage were housewives. Again the emphasis is on purely cultural subjects, and English remains the most popular.

So much for the organization of Extension work. It is the human side which must always be its great justification and which claims the heart and loyalties of those connected with it. One cannot go through the weeks of advisement before registration at the beginning of each term without a profound respect for an educational system that meets human needs as this one does. It is impossible to talk to these students without becoming involved in the problems of each individual. There is the boy, shabby and determined, who has a job in a restaurant and wants to start his pre-medical course by taking an evening class, the woman whose children are grown up and who has leisure at last for the study of ancient history which interested her when she was at college, the lonely newcomer to New York who wants a course in which modern fiction will be discussed, the Russian emigré whose records have been refused by her own college, and who can hardly believe that an American

institution will let her do work in some special science without those records. The whole world is there. One stumbles on strange glimpses of endurance and hope and intellectual passion. And always, because the system is flexible, something can be done for these men and women, somewhere there is to be found the work they need.

Then comes the teaching, and freshman classes seem dull affairs and too safe and easy places when one has met the inquiring minds of mature students with every variety of background. Home study teaching, which seems, on the face of it, little more than shades teaching shades, turns out to be exciting, rewarding, warmly personal. A curiously close relation grows up between the instructor and his students. Somehow one knows them and their shortcomings and qualities as one never does classroom students. There is something intimate and real about the exchange of efforts—to learn and to teach. Always there is the interest of the special problem, the individual endeavour. There is the little farmer's wife in the middle-west, inspired to do something about farming. She must talk and write about it, make people realize that it should be on a sound basis, should be even faintly profitable. After satisfying the claims of crying babies and hungry hired men, she escapes in the evening to write her papers—papers in which there is a penetration that cannot be taught, a pointed quality which can be developed, a rawness that can be trained out. There is the engineer in the African diamond mines who wants help with his technical articles, the doctor who has plenty of good material and has never learned to set it down usefully, the sanitarium patient who wants to read under direction.

We pay dearly enough for freedom in many of its aspects, and freedom in education sometimes seems alarming to those who know it only in the water-tight compartments—first year, second year, third year, fourth year. Yet the most valuable education is not that orthodox form to which undergraduates are exposed willy-nilly: Too often the seed falls on stony ground. What best develops the individual is the effort that springs from a tremendous wish to know something about a particular thing. A system by which opportunity to learn in this way is provided does not seem unworthy of a university.

The Carignan-Salières Regiment

(*Continued from Page 28*)

The Carignans were becoming accustomed to the new conditions by this time, nevertheless the rigours of a Canadian winter campaign were soon apparent. Stupefied by the cold, men collapsed and had to be saved from death in the snow by more stalwart comrades. Attacked by Iroquois in the heart of the forests, the redskins seemed to be like imps of Satan, with wings attached to their snowshoes. Algonquin guides got intoxicated, and the venomous Mohawks clung to the trail of the column like wolves. In a rearguard action, a detachment under Sieur d'Aiguemontes was wiped out, his place being immediately taken by the young Lotbinière, who was wounded. By March 8, the decimated little army reached Fort Chambly, and soon after that Quebec. But the expedition had broken down the arrogance of the Iroquois, and the Five Nations sued for peace, which lasted many years thereafter. The Carignans had successfully achieved their mission, and with it the history of the Regiment practically comes to a close.

Disbanded in Quebec, with the exception of two companies, most of the officers and men remained in Canada.

In France, the authorities could not abruptly wipe off the Army List a regiment as famous as the Carignan-Salières, and so for years the handful of men of the two "Colonel Companies" paraded with their tattered flags, the sole representatives of a famous corps, at the side of full strength regiments. In 1671, a brief resurrection came to the Regiment in the Dutch War, when the Prince de Carignan and the veteran Colonel, M. de Salières, again led it on active service for five years.

After that the Carignan-Salières came to an end, to be almost forgotten by all except a few Canadians and historians; though, after changing its name to Soissons, Lorraine, Perche, and 47th Infantry, the Regiment persisted as a dim tradition till recently. This summer, two and a half centuries later, it triumphantly returned to the world's attention, marching through the streets of Paris amid cheering crowds, at the head of a long dusty column of the historic French regiments who have helped the cause of civilization in various parts of the world.

"Gentlemen, McGill!"

(The toast to the University proposed at the Reunion Banquet on October 16 by Dr. C. W. Colby; and the Chancellor's Reply)

Mr. Chairman; Mr. Chancellor; Sir Arthur; Fellow-Graduates:

A poet, who must have been at one time in the insurance business, tells us that:

The years of our life are three score and ten,
But an old lady with an annuity—the Lord knows when!

It cannot be said that a like uncertainty hangs over these quinquennial festivals, which bring us back with filial piety to McGill. They are well and truly dated. But only the Lord knows, five years in advance, what the state of the world will be when our next gathering takes place.

Suppose, for instance, that teaching had begun at McGill in 1818 instead of 1821. Then our first centenary would have fallen exactly at the time of the Armistice. Our first subsequent quinquennial would have come in the midst of the depression which followed the post-War boom, while our second would have seen us all on the top of the wave in the autumn of 1928. It is easy to imagine that, had we assembled then, each of us would have come playing on a psaltery, or a timbrel, or a hautboy, or on one of the other numerous musical instruments which are mentioned in the Psalms of David: whereas now it requires considerable courage even to go off in a corner and play the jews-harp by oneself. But, though fortune continues to turn her wheel as rapidly in the Twentieth Century as in any age since wheels were invented, these changes of circumstance do not impair our affection for Old McGill. On the contrary, we feel more drawn to her in bad times than in good, for it is then that we are marshalling our reserves—moral quite as much as material. It is then that we are testing those fundamentals which became ours in the days when we first learned that red in the colours of McGill is more properly called gules.

The reaction of a graduate to his college is such an intimate thing that each of us has to define and measure it for himself, as well as to feel it. It is more than shouting ourselves hoarse at a football game—ten, twenty, thirty, forty, or fifty years after we have taken our degree. That is splendid as far as it goes, but it is not everything. There are also the impulses which embedded themselves in our natures during those wonderful years when the two worlds—the world of ideas and the world of experience—were bursting upon us. Of that time, too, were the inspirations which quickened our interest in books, or in the researches of the laboratory; the early resolves; the dreams of a cathedral builder. To have lost these possessions, to have thrown them to the pursuing and ravening years, is to capitulate without the honours of war. The worst thing that can happen to a man is to find that in spirit he is a defeatist. And such would be the deplorable fate of an alumnus—if ever there were one—to whom the first fresh idealism of college days had become as nothing. Breathes there a man with soul so dead!

It seems to me that Truth (written with a capital letter), in the Abstract (also written with a capital letter, if you like)—I say, it seems to me that Truth in the Abstract is of very little service to any one unless and until it becomes associated with something concrete. Now the most important concrete entities on this planet are people. What the University does is to bring a few people, highly favoured by circumstance, into contact with Truth, or certain aspects of Truth, in such wise that the mind of the human being in question may be enlarged, and his character may be ennobled. Nor can we ever forget that university life means and involves the mutual reactions of all the members of the university society—the undergraduates not only receiving instruction from appointed teachers, but teaching themselves in ways which are sometimes obscure to the observer, but which, however mysterious and complex, are always important.

I venture to emphasize this humanistic aspect of the university in general, because of our own personal relationship to McGill. Without claiming that we here present are the fine flower of her effort during the past fifty years, we are certainly a portion of the

bouquet—the highly variegated bouquet—which has come to bloom in her garden. Thus we are not only names, printed in a catalogue which is revised once in a while, but actual human beings who, however much we may differ in other respects, have this precious common denominator—that we have come under the same academic spell, have haunted the same shades, have felt pride in the same outstanding names, have revered the same heroes fallen in battle, and have ourselves to some extent, however small, contributed to the upbuilding of a great tradition. These things being so, how can we help being stirred and stimulated when we attend one of these reunions where priceless memories are revived, where once more we meet with classmates from whom, in many cases, we have been long separated by great distances; and where we dignify ourselves by paying fealty to the mother who nurtured us?

I recognize, Sir, that it is impossible to disclose in a few words spoken at a banquet the secret of a university's success, or to summarize those things which collectively constitute its tradition. Still there is one matter of the utmost consequence which can be placed in high relief: and it is this. Fortunately McGill began at an early stage to recognize that the success of a university depends upon its ability to enlist and retain intellectual leaders who are at the same time men of character. By accepting this as a guiding principle, our Alma Mater had come forward even a generation ago to a point where her international standing was far beyond her physical resources and the number of her students. We should feel grateful that the tradition established before the War persists in full vigour. Himself a born leader, Sir Arthur has had a better opportunity than any of us to see what leadership means, alike in the life of action and the life of contemplation. With that splendid soldier, Robert E. Lee (and, I think, with him alone) he shares the experience of presiding over an institution dedicated to science and letters—having first commanded a great national army in the field.

And now I should like in a concluding word to comment upon our familiar and admirable motto, *Grandescunt Aucta Labore*. To recall it is the more timely because just now everyone is urging everyone else to work hard—that is, if he can find anything to do. Well, there are always things that can be done for McGill, and they can be done in a great variety of ways. Given a living loyalty, forms of expression quickly discover themselves. If you will permit me to construe these three words of our motto after the manner of the Fourth Form, I would suggest that *Aucta* means that we have got away to a fine start; or to speak more academically, that we have made a splendid beginning. From *Grandescunt* I wrest the meaning that it is the destiny of McGill to grow greater age by age, not only absolutely but relatively. Such is the objective of those for whom she is a large part of life. *Labore* has to do with the process, the means, by which this fixed purpose can be accomplished. *Labore* signifies in this context, "everlastingly keeping at it." Thus my very free translation of our motto works out in plain English something like this. "Enough has already been created to show that McGill can hold her place in the front rank of universities if we everlastingly keep at it."

Now who are the people referred to by this use in the plural of the first personal pronoun? "We" does not, and cannot mean any sovereign state outside of Canada. Thanks to the British North America Act, it cannot mean the Dominion of Canada. Equally it cannot mean any sister province. It cannot even mean the Province of Quebec to the degree that, in the case of the University of Toronto, the Province of Ontario might be meant. By elimination, those who are to keep McGill great and make her increasingly greater are the Provincial Government of Quebec, so far as it can and will go; the City of Montreal, as a municipality, to a like degree; the citizens of Montreal, as individuals; her friends—and she has powerful friends—in other provinces and other lands; and her graduates. As time goes on, as the resources of the graduates become larger, their part in this effort (or, rather, let me say, *our* part) must and will be increasingly important. Meanwhile, even in such times as these, *Grandescunt Aucta Labore* is a challenge which none of us can disregard.

And so, fellow-graduates, recalling hallowed memories, confessing anew our debt of honour and affection, saluting the classmates we loved and who are with us no more, drawing fresh hope, courage, and purpose from the lives of those who in peace and war were worthy of their nurture, let us drink to the enduring prosperity of McGill. *Esto Perpetua, Semper Augusta!*

Mr. Beatty's Reply

IT is a great pleasure as well as a privilege to be asked to respond to the toast to McGill University, though I would have preferred to have that honour conferred upon someone more closely in touch with the activities of the students and of the graduates, who, together, have created and are maintaining the spirit which plays no little part in the reputation which their Alma Mater has earned. I have been associated with the work of the University through the occupancy of the office of Chancellor for more than ten years. They have been ten years of progress, of absorbingly interesting problems, and a gradual evolution to a better conception of the University's functions, not only by those in charge of its affairs, but by its many thousands of friends and admirers.

There is something appealing in the problems of a great institution of learning. There is something inspiring in its activities and a great deal of practical idealism in the policies framed for its advancement and that of its undergraduates. To me, there is also something attractive in the man who is engaged in university work. My own scholastic attainments were never such as would have won me a place in the ranks of real students in this or any other generation, but even I have been able to attain some measure of success in comprehending and exploring the problems of this University. It is interesting to witness, even at a distance, the controversies which education and the theories of education provide. It is almost thrilling to follow the combat between "Battling" Leacock and "One-round" Waugh on the subject of preliminary education in this and other provinces. It is pleasant, if at times surprising, to realise that a professor thinks, and it is even more impressive when one appreciates that he thinks independently.

What the average undergraduate gets from a university is something almost intangible in character, some knowledge of the process of living, the glimmer of realization, usually only fully appreciated after his graduation, that there is some merit in study and some value in a stored mind and some importance to be attached to the possession of logic and training in thinking. Taken by and large, however, the average student leaves his college with a full appreciation of the fact that he has spent four or five years in pleasant association, in interesting evolution, and in equipping himself to take his place at maturity among those whose recognition he welcomes and who, like himself, are ordinary Canadians, enjoying the fascinating pastime of earning a living, and conscious of traditions in an educational sense he would not have possessed had he missed a university course.

Many comparisons of the advantages of various universities are made and, to those who are familiar with their work, each may possess individual characteristics and merits which are peculiarly their own. McGill University, however, has always occupied, and will in an increasing measure continue to occupy, a position unique among Canadian universities. It is blessed with a reasonable endowment, without which it could not exist; it is fortunate in its Principal and in the members of its faculty; it is not so large in numbers that it is unwieldy or casual in its methods; and it is sufficiently individual to be able to act independently and to create for itself standards of education and of usefulness not always open to the average university.

It has been the custom on this continent to consider a university great in proportion to its population or the size of its endowment. Measured by either of these standards, McGill is not a great university, but measured by its personnel, the calibre of its graduates, by the men who have added to its reputation while adding to their own, the healthy spirit which has prevailed and continues to prevail within its halls, and by the generally wholesome nature of its student body, McGill has always ranked among the foremost of universities on this continent. We, who sit year in and year out, in the councils of the University and dream dreams for its future and evolve plans for its administration, have in recent years come to very definite conclusions as to wherein lies that future, and, with your permission, I will briefly outline some of the plans we have in view.

We propose, when more normal conditions permit, to add, through an appeal to the public and to the graduates, to the endowment of the University, to enable it to more nearly approach balancing its budgets from year to year. We have no ambition that the University should be larger than it is today, but rather that it should be smaller. We have an overweening desire that it should so increase its standards of scholarship through the raising of admission tests, and so improve

its methods of teaching, that it will be regarded as the university *par excellence*, the university of higher studies, the real post-graduate university of Canada. We do not desire numbers, but we do strive for quality in order that in future years it may be said that the graduates of McGill and the post-graduates from McGill have become the leaders in science, in research, and in the learned professions, to the advantage not only of themselves but to hundreds who will receive their individual inspiration from them. This is not the ambition of an institution of learning which desires to be exclusive, or which will hold itself aloof from other educational institutions. It is the ambition of the University to occupy an eminent position in things educational; to perform a work which is not being performed in the same way or to the same extent by any other institution of learning in this country; to have quality in its undergraduates, in its post-graduates, and in its staff, in order that the University may itself reach heights of prominence and usefulness which will reflect credit upon this Dominion and upon itself.

It would be idle for me to try and persuade you that all men and women or boys and girls are capable of extracting from a university course enough to justify their taking it. There are many who fall below a proper standard because they do not possess the qualities of mind, the steadiness of purpose, or the inclination, to take from the university all that the university can give, and it does not follow that these strictures apply only to those who have made a notable failure in their academic activities, measured by the usual examination tests. You cannot make a race-horse out of a Clydesdale; and you cannot make a scholar out of an indifferent student. A university is bound to be judged not by the number of those who have passed examinations, but by the quality of those who contribute to its work while enjoying the blessings of its facilities.

Your reunion has been filled with many functions and you have listened to many speeches—some of them good. You have been told of the value of a university man to this country in this period of economic crisis; indeed, it has been suggested to you that the country leans upon university men more under these circumstances than in normal times. That this *should* be the case is beyond peradventure, but that it *is* the case is more open to doubt. The valuable man, or men, to Canada at this juncture in her history, are those who are constructive in thought, courageous in action, and confident of themselves and of the country. It is true that, less than three years ago, few men believed, and still fewer prophesied, anything in the nature of the serious world-dislocation through which we are now passing. The nations of the world went through a period of horror during the war and no one thought that the fibre of men or the resourcefulness of nations would be put to a more serious test than in those four ghastly years; and yet in the year 1931, thirteen years after the conclusion of hostilities, we find the world racked by new economic problems, which it never expected it would have to meet, and we find, too, a dullness of comprehension as to these problems and in many places an obvious ineptitude in grappling with them.

It must be because of the width and length of the so-called depression that we have lost our perspective, and have become confused because of the newness and gravity and complexity of the issues we now face. It is quite true that the nation has need of the assistance of men with trained minds, but who can expect the average citizen, no matter how well educated, to provide a solution of problems which puzzle the minds of the most outstanding students of international, financial, and industrial problems. Our duty, and our first duty, is to exercise those homely virtues of prudence and of economy, to be steadfast and courageous, and to support those in authority who have suddenly been confronted with new and grave responsibilities, for which even they have not been entirely prepared.

There is no warrant in these times, if there ever was, for destructive movements, the sowing of the seeds of discontent, or captious criticism of governments, individuals, and institutions, who are struggling manfully to get their feet on solid ground in order that by their strength they may contribute to the strength of the nation.

It can be said of Canadians, who are far from being a boastful people, that they are steady, level-eyed, and prone to meet their difficulties confidently and without hysteria. I believe Canada is showing more of this spirit today than ever in its history, and if the greatness of a nation can be judged by the fibre of its people, this Dominion is already a great nation. We have suffered for two years as we have never suffered, and though,

because the difficulties are facing us, they may appear to be greater difficulties than ever experienced before, still it is undeniable that the problems we are meeting are new and they weigh heavily upon the citizens of this country. But if one can get away from the gloom which seems to prevail in all financial centres and go through Canada, as I have recently done, and observe and talk to those, particularly in the West, who have their own immediate and serious problems, one cannot but be impressed with the fact that there is nothing about this country that is radically wrong, or anything that is not capable of solution, given wisdom, prudence, and courage.

We need not expect a miracle, or that we will wake up and suddenly find ourselves on the verge of a very great prosperity, but we can expect, and expect with some confidence, that we will gradually emerge from this valley of tribulation, provided we are steadfast and support constituted authority and the institutions which have made this country what it is.

None of the fundamentals have changed; Canada is still a great country, with actual and potential wealth of great magnitude. It does produce and will continue to produce the finest grain grown in the world; it will produce minerals of great variety and value; it will manufacture even to a greater extent than it has in the past; its population will increase, and it will not be long before the question of immigration will again be agitating the minds of those responsible for what the policy in that respect should be. There will, I am convinced, come out of the recent changes, which are both political and economic, a very great appreciation of the value of reciprocal trade arrangements among the nations of the world. Many preconceived theories of protection and free-trade will of necessity have to be scrapped, but we are probably on the verge of a peculiar economic anomaly, namely that of the institution of general tariffs being the fore-runner of increased and freer trade.

All these things are being taken up and explored and solved, so far as the solution is possible by the wit, ingenuity, and the resource of men; and in their solution and the immediate effect of those problems which face this country Canadians are neither unmindful of their importance nor heedless of the measures to be adopted to remedy them.

I have been asked what it is that keeps a university graduate loyal to his Alma Mater even though separated from it physically for many years. The answer is obvious: he has four, five, or six years of collegiate association under the mantle of the university which leaves an indelible impression upon his mind, the recollection of which is everlasting. I have been asked, too, what contribution can a graduate make to a university, even if far distant from it for a long period; and the answer is equally obvious. The only contribution he can make is to maintain those standards for which his university is conspicuous and so act that he is a credit to it and that its reputation and its prestige are increased through him. While it is difficult for an alien such as myself to speak of your University in terms that are convincing, I can only say that, judged from an impersonal and detached association with the University for many years, and a more intimate association in the last decade, I know of no institution of learning in Canada that has played a finer part or is destined to be on a par with it. It is a fine institution, it is not over-ambitious, and its policies are based upon the firm conviction that, given the support to which it is entitled, it will be in the future a greater university than even it is today, magnificent though its traditions have been.

James Douglas

(*Continued from Page 35*)

those who wished could learn something of the science of mining.

Gentle and considerate in his treatment of others, he was exacting only in his demands upon himself. He was an indefatigable worker. Idleness had no place in his scheme of things. His relaxation was obtained by devoting his spare time to studying subjects not connected with his professional work. He was specially interested in Canadian history and published a "History of Quebec," "Old France in the New World" and "Contrasts and Parallels in Colonial History." In 1887 Douglas built a house for himself in Spuyten Duyvil, New York, and made it his home. There he spent "that old age which has its foundation well laid in youth." The last four years of his life were saddened by the Great War, the tragedy of which he felt intensely. He died in June, 1918, and was buried in Quebec.

Book Reviews

AN Introduction to the Literature of Vertebrate Zoology based chiefly on the Titles in the Blacker Library of Zoology, the Emma Shearer Wood Library of Ornithology, the Bibliotheca Osleriana, and other Libraries of McGill University, Montreal. Compiled and edited by Casey A. Wood, M.D., LL.D., Oxford University Press, 1931, 4to, pp. XIX+643.

This impressive volume, the work of a distinguished surgeon, naturalist, and bibliophile, is a great deal more than a bare catalogue. Although its preparation for the press has doubtless been a labour of love, yet it has been an arduous undertaking from the beginning to the end. No fewer than nineteen informative chapters, dealing with various phases of the literature in different countries and in the several branches of the subject, lead up to the annotated catalogue. When one considers the constant succession of tireless observers who have contributed their quota to building up the fabric of natural science, from one century to the next, it is impossible to accept the proposition that zoological results are inconsequential. The sequence of results which have been obtained since the invention of the microscope refutes the charge of futility. The introductory chapters of the Casey Wood Catalogue serve to bring out many of the salient features which have marked the progress of zoology from Aristotle and Pliny to Darwin and after Darwin. The book is adorned with a coloured frontispiece of the Dodo from an original aquarelle attributed to Charles Collins (1736), now in the possession of the Blacker Library of Zoology.

All friends of the McGill University Library will welcome this notable contribution to its archives; and all those for whom zoology has any meaning will appreciate the generous enthusiasm which has brought the work to completion.

A.W.

In a delightful essay, *Lucian, Plato and Greek Morals* (Basil Blackwell: Oxford: 6 shillings), which, it would seem, must interest any scholar of the classics and is, beyond doubt, of more than passing interest to any average reader, Mr. John Jay Chapman presents Lucian as a man, with skilful illustrations of the variety of his work and illuminating explanations of how his point of view accorded, or in some instances sharply disagreed, with the morals and customs prevailing in his time. Mr. Chapman suggests that his book is "merely an essay in popular form, whose aim is really to call attention to the Fowler and Harmon translations and thereby, ultimately, to Lucian himself." This is too modest a description of the work, and one hopes that the attractive little volume will bring to its author the measure of credit that its production makes his due.

R.C.F.

Science '23

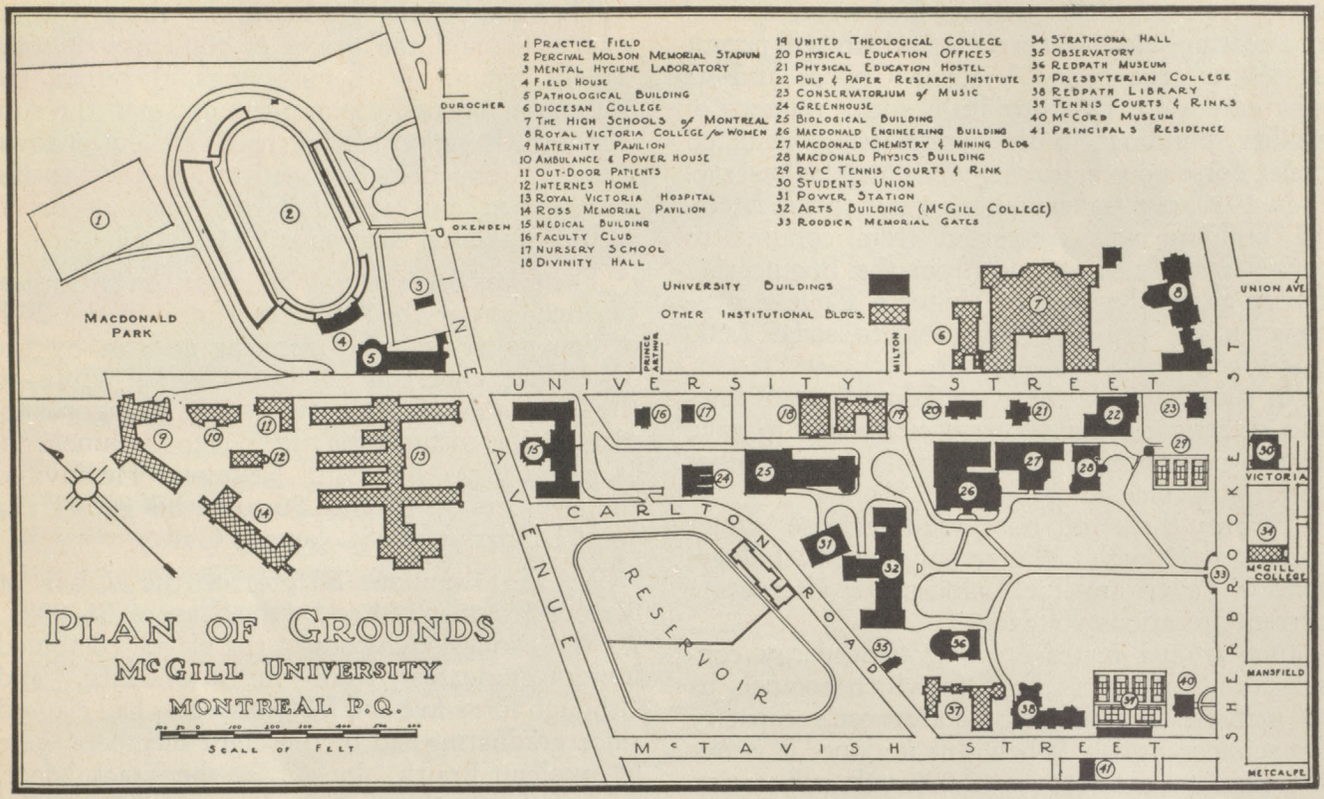
AFTER the McGill-'Varsity football game on October 17, a stag dinner was enjoyed by the class of Science '23. It was held in the Mount Royal Hotel, with twenty-three men present; also Mr. Glenn Adney, who provided excellent music.

After the fruit cocktail, the men were called upon to stand in turn and announce their names, whether married or single, and if married how many children. After dinner, toasts were proposed to the King, the members present and their families, the departed members, to absent members, and to Old McGill. Then followed speeches and the singing of McGill songs.

In the toast to departed members, fond remembrance was reverently paid to Jack McCaw, Bernard DeSalaberry, Len Kezar, Napier Wylde, McCallum, Fred Finley, and Robert Smith.

The members of the Class able to attend the dinner were as follows:—Simpson, Yorston, Whittemore, Vrooman, Stirling, Shier, Knapp, Budden, Cuttle, Munro, Armstrong, Lebaron, Stephens, Moran, Johnson, McKenzie, Cross, Antliff, Fagan, Bieler, Abbott-Smith, Smallhorne, Finlayson, and Lea. One of the interesting features was to hear each man give an account of where he had been and what he had done since graduation, the result clearly indicating that this class is making its influence felt in many fields of endeavour. It was unanimously decided to repeat the class dinner next year after the McGill–'Varsity game. An effort will be made to round up many more of the class for the next event, even though they may be located in other cities, so that the fellowship and friendship renewed at the dinner may be furthered and continued.

A. V. ARMSTRONG, *Secretary*



Some impressions of the difficulties presented in lighting, heating, and powering the widespread buildings of McGill can be gained from this diagram. Incidentally, the plan will be of interest to many graduates, as it shows all the most recent changes in the University grounds.

The Lighting, Heating & Powering of the University Buildings

By P. W. MACFARLANE
Superintendent, Buildings and Grounds Department

THE lighting, heating, and powering of McGill University is a division of the Buildings and Grounds Department, which is responsible for the upkeep of buildings, grounds, and fire prevention measures. The light, heat and power station is treated as a manufacturing plant, whose function is to produce these services, and whose statistics for the year ending May 31st, 1931, will give some idea of our requirements.

The nineteen centrally heated, and twenty-six lighted and powered, buildings consumed 90,000,000 pounds of steam and 1,500,000 kilowatt hours of electrical energy. This is exclusive of the heating of the Pathology Building and Field House, which consume some 10,000,000 pounds of steam, supplied from the Royal Victoria Hospital plant.

The fourteen locally heated buildings are furnace equipped, and burn some 500 tons of anthracite coal of various sizes. These buildings will be attached to our Central Plant as conditions permit.

Our productive resources consist of 1,120 installed boiler horse-power, capable of being operated at 175% rating, 1,400 installed steam engine horse-power, and 500 horse-power of purchased electrical energy.

The Central Plant consumes annually some 5,250 tons of Nova Scotia bituminous slack, water borne to Montreal and delivered to our bunkers as required. This coal is burned on travelling chain grate stokers under suspended combustion arches, which has given satisfactory results as well as a marked freedom from smoke nuisance, a very desirable feature in our city.

In 1929 and 1931, steam producing equipment was reconditioned by increasing the height of boiler settings and the introduction of steam

flow, and combustion meters, feed-water control and heating, soot blowers, etc., which will permit us to heat the Royal Victoria College and its new extension, Divinity Hall, and a number of smaller buildings with our existing installed boiler horse-power, leaving a comfortable reserve.

In 1930, our transmission service to the Medical Building was converted from conduit to tunnel and a new tunnel from the Engineering Building to the Royal Victoria College was constructed, bringing our total to some 2,000 lineal feet.

In these tunnels there are housed steam lines and electric conduits of sufficient size to take care of expansion of the University for a number of years to come.

Twenty-three of our buildings use direct current at 220 volts. Three buildings, Pathology, Pulp & Paper, and Field House, use alternating current at various voltages.

Our annual increase in electric energy consumption appears to be 5%, which compels us to increase our motor-generator set's capacity for summer loads. When this is done, it is our intention to construct a 12,000 volt sub-station at our Central Plant which will consolidate our purchases and provide for economical expansion.

In this short article there is no thought of doing more than to touch upon one or two aspects of the heating and power problems upon which the department is constantly engaged, but the Superintendent Engineer and staff extend an invitation to all members of the University to visit the Central Station and there inspect the equipment installed and the methods employed. There are a number of features in which we believe that engineering graduates and undergraduates might be interested.

Science '85 and '86

THE Reunion of 1931 possibly meant more to older graduates than to those whose classes had not been reduced by the passing years.

The Applied Science Class of 1885 has six surviving members:—Charles W. Trenholme, Montreal; Jude Routhier, Ottawa; Ernest McC. Macy, Berlin, N.H.; Thomas W. Lesage, Montreal; Dr. Samuel Fortier, Berkeley, California; and Dr. Edward P. Mathewson, Tucson, Arizona, Class Secretary.

Those remaining of the Applied Science Class of 1886 are:—William Murray Reid, Montreal; John George Gale Kerry, Toronto; Nevil Norton Evans, Montreal; George Herbert Dawson, Victoria, B.C.; and Frederick W. Cowie, Montreal, Class Secretary.

The number of graduates in these Classes was small, and the places of residence of some widely distant. With misgivings, therefore, the Secretaries opened communication upon the subject of the Reunion at Montreal. The out-of-town members replied in doubtful terms, even to the impassioned entreaty that, for some of us, it would be the last reunion at Old McGill.

The Class Secretary of '86, after the enthusiastic luncheon at the Windsor Hotel on the 29th of September and the inspiring address by the Vice-Chancellor, Sir Arthur Currie, wrote to the graduates of these two years, giving particulars of the enthusiastic turn-out to the luncheon, as indicating a successful Reunion. He invited the members of '85 and '86 to be his guests at a Joint Dinner at the St. James's Club.

At the Reunion, 66⅔% of the Class of Science '85 registered, and of the Class of '86, 80%. At the Dinner, eight out of the eleven combined living graduates were in attendance, and although forty-five and forty-six years had elapsed since graduating, all of the eight members were in excellent health. In fact, at the Track Meet, two of the members of the Class of '85, entered in the Handicap Race, and brilliantly won first and third, i.e., Thomas W. Lesage, first, and Ernest McCourt Macy, third. And it may be noted, that at least one of the others danced until three-thirty the preceding night.

The entertainments staged by the Committee were extraordinarily well attended. The programmes were perfectly carried out, and the response of the Graduates to the sentiment of Reunion was most remarkable.

A few words must suffice to suggest the profound feelings of satisfaction and sorrow, when the eight out of the eleven living graduates of Science '85 and '86 met in the St. James's Club, assisted by an intimate friend of the host, a Graduate of Science '97—to Reunite. From the three absentees, Mathewson, Fortier, and Dawson, the Class Secretary of '86 read letters of regret and telegrams of greetings, and reply telegrams were drafted. Of those who had "gone west," many references were made. And what a recollection it was!

Some had risen to a high rank in their professions, but of all and every member, living, absent, and departed, there were none who had not, by integrity and honour, reflected glory to their Alma Mater.

Of such is the Spirit of Reunion.

F.W.C., '86

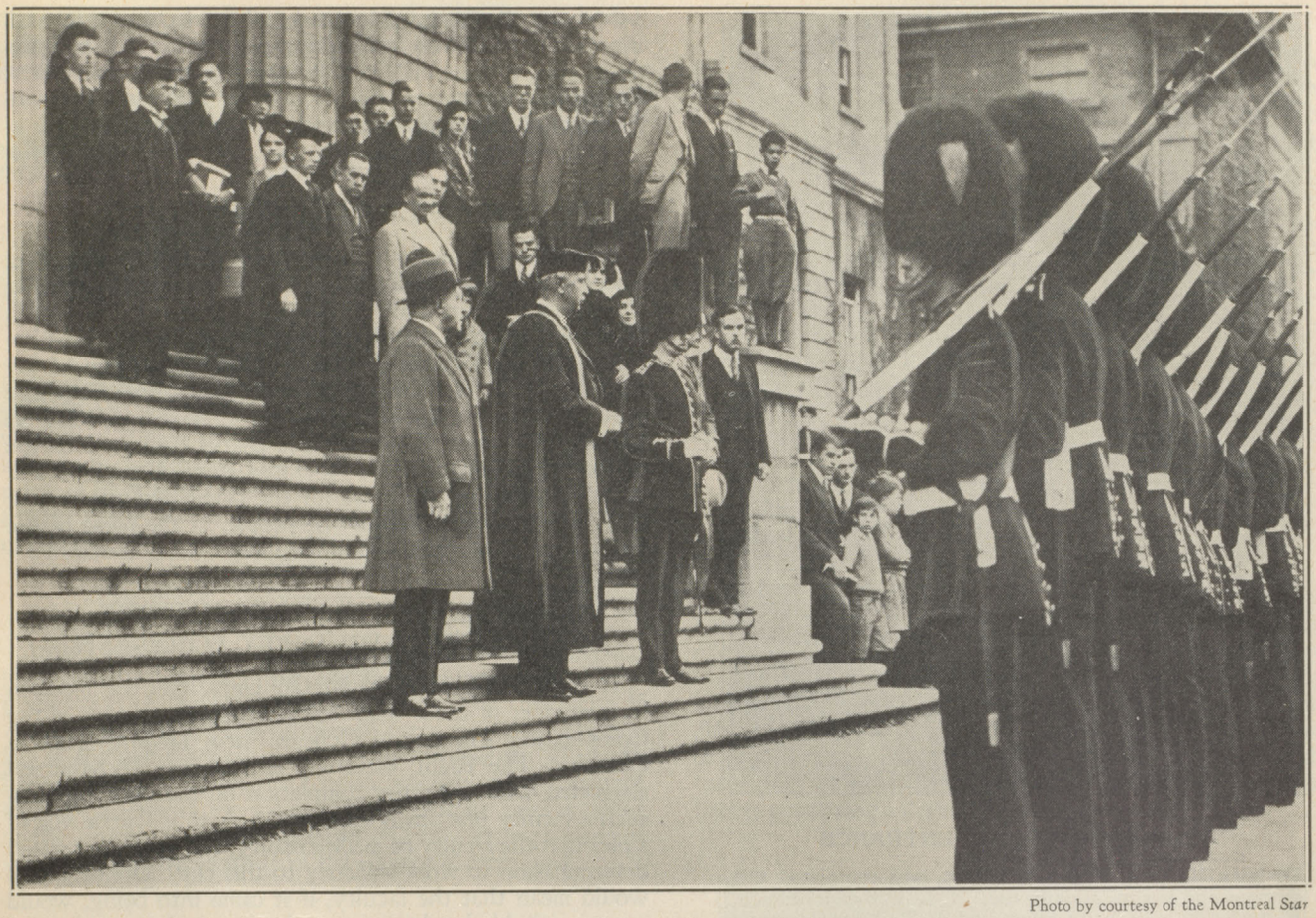


Photo by courtesy of the Montreal *Star*

FOUNDER'S DAY, 1931

Ceremonial on Founder's Day, as mentioned elsewhere in *The News*, was marked this year by the presence of a detachment of His Majesty's Canadian Grenadier Guards, who paid tribute to James McGill as Colonel of the unit from which their regiment is descended. Brigadier-General F. S. Meighen, C.M.G., Arts '89, Honorary Colonel of the Guards, is shown on Sir Arthur Currie's right.

University News and Notes

FOUNDER'S DAY CEREMONIAL

Founder's Day, October 6, was marked this year by the usual convocation in Moyse Hall for the conferring of degrees and by the presence in the University grounds of a detachment of the Canadian Grenadier Guards. James McGill was Colonel of the First Battalion, Montreal Militia, from which the Grenadier Guards Regiment is lineally descended. The Guardsmen, therefore, in the presence of Sir Arthur Currie and their Honorary Colonel, Brigadier-General F. S. Meighen, C.M.G., Arts '89, paid tribute at the Founder's tomb to traditions shared with McGill University. It is understood that the Guards' participation in Founder's Day ceremonial is to continue in years to come.

OLD COLOURS RESTORED

With financial assistance from His Majesty's Canadian Grenadier Guards, two old standards, the King's and Regimental colours of the First Battalion, Montreal Militia, have been restored to good condition and now hang in the Ethnological Museum at McGill. One flag is a red ensign, the other a Union Jack. Both bear the words: "First Battalion, Montreal Militia" and the motto: "Pro rege et Patria." As James McGill was the Colonel of this unit, from which the Grenadier Guards have descended, it is fitting that these colours should rest, through the generosity of the Guards, in the University James McGill founded.

REGISTRATION

Registration at McGill increased slightly this autumn, according to a report presented to Corporation by the Registrar on October 21. With registration in the Faculties of Graduate Studies and Research, Music, and Agriculture uncompleted, the total stood at 2,528, compared with 2,503 in 1930. The 1931 total was made up as follows:—Arts and Science, 1,040; Commerce, 266; Engineering, 337; Architecture, 47; Law, 91; Medicine, 468; Dentistry, 32; Physical Education, 34; Graduate Nurses, 38; Social Workers, 16; Library School, 18; Pharmacy, 3; Agriculture, 69; Household Science, 40; Institution Administration, 49; Graduate Studies and Research; figures not available.



DIVINITY HALL: THE ENTRANCE

Divinity Hall, on University Street, was completed this autumn and is now in daily use. H. L. Fetherstonhaugh, B. Arch. '09, was the architect and A. F. Byers Company were the general contractors.

LIBRARY REPORT

The report of the University Librarian covering the year ending June 30, 1931, presented to Corporation in October, showed total attendance in the McGill libraries of 104,529 and circulation of 95,336. Accessions by gift totalled 3,205, by purchase 7,042, and by exchange 403. A total of 5,483 books were bound and repaired in the year.

MEMORIAL TO DEAN H. M. MacKAY

In memory of the late Dean H. M. MacKay, a tablet the gift of the Engineering Undergraduates' Society, was unveiled by Sir Arthur Currie in the Macdonald Engineering Building on October 17. The bronze plate, designed by Roy Wilson, a graduate of the School of Architecture, was unveiled in the presence of Mrs. MacKay, Professor N. N. Evans, and a large gathering of the late Dean's colleagues, former students, and other friends, the last group including Arthur Mudge and Edward Darling, who graduated with Dean MacKay in the Science class of 1894.

LECTURES ON GOLD STANDARD

In view of the interest in the subject aroused by Great Britain's action in ceasing to redeem currency notes in gold, the University arranged, in October, to present four lectures on the working of the gold standard, in the Bell Telephone Building, Montreal. The lectures, it was announced, would be free, upon presentation of a business card, and the hour of 5.30 p.m. was chosen, as convenient for those who would attend. Dr. J. P. Day, Associate Professor of Economics, was appointed as lecturer.

OPENING OF DIVINITY HALL

Impressive ceremony by dignitaries of the Co-operating Theological Colleges affiliated to McGill marked the opening of the new Divinity Hall on University Street on October 5. In dedicating the chapel, the Reverend Dr. G. Abbott-Smith, Principal of the Diocesan College and Dean of the joint faculty, said: "On behalf of the Joint Board and the Joint Faculty of the Co-operating Colleges affiliated to McGill University, I declare this chapel dedicated to the service of Almighty God, separated from all profane and common uses, and set apart for the praise and worship of God, and the edification of His people, in the name of the Father, and of the Son, and of the Holy Ghost. Amen."

FACULTY OF DIVINITY FORESEEN

A Faculty of Divinity at McGill University was foreseen by a number of those who took part in the opening of the Co-operating Theological Colleges' new Divinity Hall in October. The Right Reverend the Bishop of Montreal suggested that with the completion of the new building such a faculty practically existed; Sir Arthur Currie voiced a plea that the faculty be made a reality; and others expressed determination to work selflessly to this end. Divinity Hall would mean that the faculty, if it came into being, would possess suitable headquarters and accommodation.

DEAN P. E. CORBETT ON LEAVE

Before the opening of the autumn session, the University announced that a year's leave of absence had been granted to Dean P. E. Corbett and that in his absence the Faculty of Law would be administered by C. S. Le Mesurier, Professor of Civil Law. Professor Le Mesurier, Arts '09, Law '12, served overseas with the 14th Battalion, Royal Montreal Regiment, joined the staff of McGill University in 1924, and was appointed a K.C. in 1925. He had previously practised law in Montreal.

DEATH OF ROBERT BLACKER

Word was received by the University in September of the death in California of Robert R. Blacker, donor of the Blacker Library of Zoology, the most comprehensive collection of works on vertebrate zoology in any North American university. Mr. Blacker was to have received an honorary LL.D. degree from McGill at Convocation last May, but illness prevented his attendance. His splendid library at McGill, in addition to standard works of value, includes rare reports of scientific voyages and many pertinent periodicals.

TRIBUTE TO DR. JOHNSTON'S MEMORY

Tribute to the memory of Dr. Wyatt G. Johnston, Med. '84, former Professor of Hygiene, authority on medical jurisprudence, bacteriologist, and early advocate of the use

of anti-toxin in the treatment of diphtheria, was paid by delegates to the American Public Health Association's annual convention in September. Visiting Dr. Johnston's grave in Mount Royal Cemetery, where a wreath was placed by Dean C. F. Martin, the delegates heard a dignified eulogy by Dr. M. Ravanel, who pointed out, in regard to Dr. Johnston, that "few men of his time in Canada contributed so much and such valuable research in the field of public health."

CELLULOSE CHEMISTRY WORK

That valuable work has been carried out by the Industrial and Cellulose Chemistry Laboratories of the University's Pulp and Paper Institute is revealed in a report recently published. Distinct contributions include Dr. J. B. Phillips's work on "Resins in Jack Pine," which it is believed will help solve the problem of pitch in the manufacture of newsprint. Other noteworthy results include knowledge gained from a study of the reactions underlying the manufacture of certain cellulose ethers.

CORTIN PROCESS SIMPLIFIED

Under the direction of Professor J. B. Collip, the Department of Biochemistry has effected improvement in the preparation of "cortin," which is used in the treatment of Addison's disease. The process of extracting this hormone has in the past been most difficult and expensive, 50 to 150 beeves being required to furnish enough of the extract to treat a patient for a single day. Definite improvement of the process is now announced and further improvement may be looked for as study of the subject is continued.

ADDITION TO WESTERN HOSPITAL

Work has begun on a million-dollar addition to the Western Branch of the Montreal General Hospital. This 10-storey annex, to be completed in the summer of 1932, will add 100 beds to the hospital's capacity and will permit advantageous rearrangement of many departments. J. Cecil McDougall, B.Sc. '09, is the architect and Anglin-Norcross, Limited, are the builders.

MECHANICAL RESPIRATORS INSTALLED

Two "artificial lungs" installed in the Children's Memorial Hospital, Montreal, in October, have proved of value, having saved the life of one child, whose respiratory muscles had been affected by infantile paralysis, and contributed to the recovery of several more. Dr. Howard S. Mitchell, Medical Superintendent of the Hospital, has stated his opinion that these mechanical respirators, the first in Montreal, provide an invaluable addition to the medical equipment of the community.

INSTITUTE OF HELMINTHOLOGY

In September the University announced that a Research Institute of Helminthology would be established at Macdonald College and would be financially supported by the Empire Marketing Board, the National Research Council of Canada, and the Province of Quebec. The duty of the Institute will be to combat parasites in livestock, which now effect loss estimated as high as $20,000,000 in a year. Parasites of sheep, cattle, swine and poultry will receive particular attention.

COAL SYMPOSIUM

In mid-October the University announced that a comprehensive study and symposium on coal would be undertaken in the weeks immediately ahead, and that lectures would be delivered by Dr. E. S. Moore, University of Toronto; Professor Edgar Stanfield, University of Alberta; J. J. Humphreys, Chief Engineer, Gas Division, Montreal Light, Heat and Power Company; A. T. Leavitt, President, Hamilton By-Product Coke Ovens, Limited; C. Tasker, Research Fellow in Fuels, Ontario Research Foundation; E. Lajoie, Chemist, Imperial Oil Company, Montreal; F. A. Combe, Consulting Engineer; J. T. Farmer, Engineer; and Lesslie R. Thomson, Professor of Fuel Engineering, McGill University. This is the first time that a study of this type has been undertaken by a university in Canada, and an authoritative volume is expected to be one of the valuable results.

GEOLOGY BUILDING NEEDED

In an address to the Electrical Club of Montreal in October, Dean Ernest Brown, of the Faculty of Engineering, noted the University's need of a building for the departments of geology, mining, and metallurgy, and of additional equipment for the study of high tension electrical problems. Always present, too, he remarked, was the need for teachers of the highest standing, in order that the Faculty might turn out graduates "who are something more than human beings possessing a certain amount of technical skill."



DIVINITY HALL: THE CHAPEL

The main window pictures the Ascension and the side windows contain in stained glass the arms of eight British and eight Canadian universities. The chapel organ is a gift in memory of the late Charles Gurd.

MEMORIAL TO DEAN MOYSE UNVEILED

His Excellency the Governor-General, on October 31, unveiled a tablet in Moyse Hall before a notable gathering of the late Dean Moyse's colleagues and kin. On the tablet are the words: "The Moyse Hall. The generosity of the Rt. Hon. Lord Atholstan, LL.D., made possible the erection of this memorial to Charles E. Moyse, Molson Professor of the English Language and Literature 1878-1920; Dean of the Faculty of Arts and Vice-Principal of the University 1903–1920; who died 28th June, 1924." Beneath this is another small tablet with the words: "The Moyse Travelling Fellowships, founded as a further memorial to Charles E. Moyse, B.A., LL.D., were given by Right Honourable Lord Atholstan, LL.D."

EMPLOYMENT BUREAU REPORT

In a report covering the period from January 6 to September 30, 1931, Miss A. D. Donnellan, Secretary, Graduates' Society Employment Bureau, notes that 35 men and 15 women were placed in temporary or permanent positions through the Bureau's efforts. Cordial co-operation has been extended by the Faculties and by many of the Dominion's leading industrial corporations, and the Bureau will continue its work, with the assurance of being able to render valuable help in the future to those who seek its assistance.

ATHLETIC BOARD'S FINANCIAL STATEMENT

Widespread belief that athletics are a source of revenue to the universities of Canada receives no support from the audited statement of McGill's Athletic Board for the year ending May 31, 1931. Expenditure on athletics totalled $24,846.92 and revenue $19,765.28, leaving to the University the necessity to meet a deficit of $5,081.64. Hockey was the only sport to show a profit—$2,830.64—despite the fact that McGill, with ten intercollegiate championships out of the fifteen contested, had the most successful athletic season on record.

DEBATING TEAM VISITS PORTO RICO

A McGill debating team of three members visited the University of Porto Rico in September and, by an audience vote of 229 to 169, upheld the contention: "Resolved that Democracy has Failed." In welcoming this first McGill team to visit Porto Rico, the Acting Governor of the island said: "McGill is one of the outstanding universities of the Western Hemisphere and has given Canada a conspicuous place in the front rank of scientific and cultural achievement. It is a privilege to test the mettle of our students against representatives of such a famous seat of learning."

PORTO RICAN VISIT'S AFTERMATH

Through no fault of its members, the McGill Debating Team that visited the University of Porto Rico this autumn caused a political upheaval of some importance. No students of the Porto Rican Nationalist Party, which seeks independence from the United States, and none of Negro blood, it seems, were included in the committee appointed to entertain the Canadian visitors. One hundred and fifty students who signed a protest against this discrimination were suspended by Dr. Carlos Chardon, Chancellor of the University of Porto Rico, whose action was given widespread publicity by the Island press. A number of the students have been reinstated, it is said, but many are still under temporary or permanent suspension.

SCHOOL STANDARDS CRITICIZED

Sharp criticism by Professor Stephen Leacock of school standards in the Province of Quebec, which he declared were far inferior to those of Ontario, and a similar comparison of the Arts faculties of McGill and the University of Toronto, to the disadvantage of McGill, marked the 67th Annual Convention of the Quebec Provincial Association of Protestant Teachers this autumn. Strong exception to Dr Leacock's remarks was voiced by Professor W. T. Waugh at a luncheon of the Montreal Rotary Club a few days later.

DR. PARMELEE DOES NOT AGREE

In a special interview granted to the Montreal *Gazette* in mid-October, Dr. G. W. Parmelee, former Quebec Provincial Director of Protestant Education, voiced strong dissent from Dr. Stephen Leacock's opinion that school standards in Quebec were far below those of Ontario. Dr. Parmelee also disagreed with Dr. Leacock's statement that the Arts course in the University of Toronto was far superior to the course at McGill. Forty years ago, this might have been so, Dr. Parmelee stated, "but when Sir William Peterson came to McGill he raised its standards in the Arts Faculty to such a degree as to make the faculty comparable with the best in Canada . . . and I have not any information which would justify the belief that those standards have been lowered in recent years."

MEXICAN STUDENTS AT McGILL

Two sons of Ortiz Rubio, the President of Mexico, are attending McGill this year. By coincidence, they arrived at the University at a time when His Excellency the Governor-General was also present. In his capacity as Visitor of McGill, the Earl of Bessborough welcomed the brothers, expressing to them and to the Mexican Consul, who accompanied them, his good wishes for the success of their work at the University.

ARGENTINE STUDENT REGISTERS

Students registering at McGill this autumn included Alejandro Estrada, the first winner from the University of Buenos Aires of the Canadian University Scholarship, tenable for one year and founded through the generosity of the Sun Life Assurance Company, the Royal Bank of Canada, McGill University, and Major E. L. McColl, Canadian Government Trade Commissioner for Argentina. Mr. Estrada, whose father is a judge of the Supreme Court of Argentina and whose grandfather was for twenty-five years professor of constitutional history in the University of Buenos Aires, graduated with honours last year and will continue his studies in engineering at McGill.

GIFTS TO McCORD MUSEUM

Recent gifts to the McCord National Museum inclule from Miss Mabel Molson, a fine collection of cloths, jewellery, papers, and records connected with the early history of Montreal; from George MacVicar, portraits of Mr. and Mrs. Robert MacVicar and documents dealing with Robert MacVicar's work as Chief Trader of the Hudson's Bay Company in the time of Sir John Franklin; and from Mrs. Robert Newton, a letter written by Sir John Johnson to Charles Blake in 1785, containing the suggestion that a mass meeting under James McGill be held in Montreal to petition for a house of assembly.

GRADUATES' EDITION OF THE DAILY

A feature of the Reunion was the presentation on October 16 of a Graduates' edition of the *McGill Daily*. Many old-time members of the *Daily's* staff joined in editing the issue or in writing for its columns, the number including F. L. Lloyd, Arts '29, D. M. Legate, of the Montreal *Star*, D. A. L. MacDonald and L. S. B. Shapiro, of the Montreal *Gazette*, J. G. Nelles, George Brown and T. H. Harris. The result was an issue in which summaries of the academc, athletic, and other triumphs of the University were skilfuly recalled and interestingly presented.

NEW ENGLAND GEOLOGICAL EXCURSION

For the first time, McGill was privileged in October to welcome members of the New England Intercollegiate Geological Excursion, who were interested in studying the unusual rock formations to be found on Mount Royal, on St. Helen's Island, and in the Laurentian Mountains near Ivry. Approximately sixty were included in the party and were delighted with the opportunities for geological field work that Montreal provides so abundantly.

FIRE SOON EXTINGUISHED

At 1.04 p.m. on September 30 fire sirens in the University grounds caused some alarm, and citizens, with memory of the disasters that fire had inflicted on McGill in the past, expressed anxiety as apparatus from several stations converged at the Roddick Gates. Flames, bursting from the roof of the power-house, behind the Arts Building, were quickly under control, however, and the damage was not serious.

DR. KIANG KANG-HU RETURNS

Returning this autumn from China, Dr. Kiang Kang-hu, Director of the Department of Chinese Studies, announced that he had been successful in obtaining the consent of the Chinese Government to the continued exportation of Oriental books to the Gest Chinese Research Library at McGill. Recognition of the outstanding position the Gest Library has attained was responsible for the Government's action, which, with the exception of the United States Library of Congress, extends to no other institution in North America.

AEROPLANES CO-OPERATE WITH C.O.T.C.

Four aeroplanes of the Montreal Light Aeroplane Club co-operated when the McGill Contingent, C.O.T.C., under Major E. B. Q. Buchanan, carried out manœuvres near Ste. Marguerite, P.Q., on November 7. Members of the C.O.T.C. gained impressive experience on this occasion in liaison between infantry and contact aeroplanes.

McGILL ON THE RADIO

Graduates have frequent opportunities to hear members of the McGill staff on the radio. Once a fortnight, at 8 p.m. on Friday, one of the faculty speaks during the Provincial hour from Station CKAC, Montreal. Almost every night at 5.30, also from CKAC, one or more are to be heard at the piano, or in a short address, during the National Council of Education hour. At 9.45 every Friday, there is an opportunity to hear a distinguished speaker from some Canadian University on the Trans-Canada hookup, in the arrangement of which McGill took an active part.

DEATH OF DR. WELLINGTON DIXON

It is with deep regret that many graduates who came to McGill from the Montreal High School, will learn of the death in November of the school's former principal, Dr. Wellington Dixon, himself a McGill man, who graduated in Arts as gold medallist in English Language and Literature in 1883. He was a life member and former President of the Graduates' Society, a former Governor's Fellow of the University, and an educationalist whose services to the Province of Quebec and Canada were such that his name will live long in the grateful memory of the Dominion.

Reunion Greeting from Japan

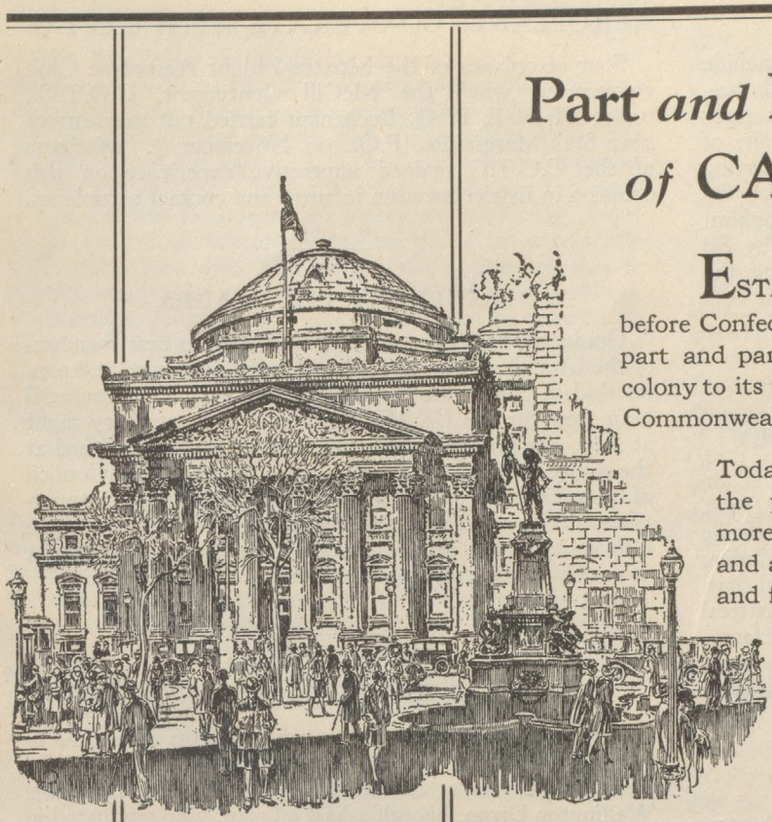
(*Continued from Page 10*)

stretch of Prairies halt our flight. Straighter than homing pigeon, fleeter than darting swallow is our flight, home to the sanctuary of Old McGill. . .

"Accept, we beg of thee, the gift of love that lies beneath these mere words, a gift we received at thy hand and which we seek to bestow wherever our lot is cast, ever in the humble spirit we learned of thee. . .

"Affectionately, your children,"

M. EDITH BAKER, Arts '25,
ESTHER L. RYAN, Arts '06,
B. RUTH POWLES (MOUNT), Arts '10,
P. L. C. POWLES, Arts '10,
F. M. JONES, Med. '27,
NORA F. J. BOWMAN, Arts '05,
N. P. YATES, Arts '86.



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The Faculty of Dentistry

(Continued from Page 18)

field of investigation in dental channels. Cavities in teeth constitute one of the diseases most prevalent in the human race; ascertain the cause and assist prevention, and no greater contribution to society could be made.

A graduate in Dentistry is assured of a good living from the day he receives his degree. The Province of Quebec offers better opportunity than most Provinces or States to the recent graduate. At present, there are only a sufficient number of Dental graduates each year from McGill University to take the place of those English-speaking dentists who have retired or passed away. What about the fifty thousand increase in population each year? We need more graduates to look after the dental needs of this growing surplus. In short, to a young man with the necessary qualifications, modern dentistry, as it promises to develop, offers in one way or another a fine professional opportunity. It also offers, as few professions can, the satisfying in his daily work of the creative instinct, and this, in the last analysis, affords the greatest of human satisfactions.

H. M. MacKay Scholarships

IN spite of the adverse financial situation, progress has been made in collecting for the endowment of scholarships in the Faculty of Engineering in memory of the late Dean Henry Martyn MacKay. About $3,000 has been invested, and the committee hopes to secure $2,000 this winter to complete the endowment of one scholarship. In view of the state of the fund, it has not been deemed wise to lay down final conditions for the scholarship. The committee has, however, awarded a scholarship for the current session to Ian Norton MacKay, the son of the late Dean, who has entered the first year in the Faculty. The income from the funds now invested will be supplemented by special "income" subscriptions, so that the total available will cover the University fees for the session. Response to the appeal for funds for the endowment has come from all parts of the world. It is the earnest desire of the committee to endow a scholarship fully, at an early date, and they hope that all who can help will do so by sending subscriptions to the Honorary Treasurer, H. M. MacKay Memorial Fund, Engineering Building, McGill University.

Deaths

BAKER, DR. MALCOLM C., Vet. 90, in Montreal, October 27, 1931.

BEATON, DR. KENNETH K., Dent. '27 in Sydney, N.S., October 29, 1931.

CHALMERS, DR. FRANK B., Med. '26, at Fort Qu'Appelle, Sask., August 19, 1931.

CRAIG, THE HON. JAMES, Law '74, in Toronto, October 19, 1931.

DIXON, DR. WELLINGTON, Arts '83, LL.D. '21, in Montreal, November 24, 1931.

GALLAGHER, DR. JOSEPH B., Med. '10, in Montreal, November 25, 1931.

HERDT, HENRI D., Sci. '93, in Montreal, November 20, 1931.

KINLOCH, DR. JOHN ALEXANDER, Med. '86, in Montreal, October, 1931.

LONG, DR. CHARLES HOPKINS, Med. '88, accidentally, at Escanaba, Mich., August 18, 1931.

MacNIDER, DR. SAMUEL, Vet. '96, at Little Metis, P.Q., in November, 1931.

MASSE, ARTHUR E., Arts '88, at Grande Ligne, P.Q., October 24, 1930.

McLELLAN, HAROLD ELMER, Sci. '19, in Montreal, September 24, 1931.

O'BRIEN, DR. TIMOTHY, Med. '84, in Wahpeton, North Dakota, November 7, 1931.

OGDEN, DR. HENRY VINING, Med. '82, in Milwaukee, October, 1931.

PLACE, EDSON GRENFELL, Arts '98, Law '01, at Lakeside, P.Q., July 31, 1931.

STENNING, DR. WILLIAM ARTHUR, Med. '94, at Ayer's Cliff, P.Q., September 21, 1931.

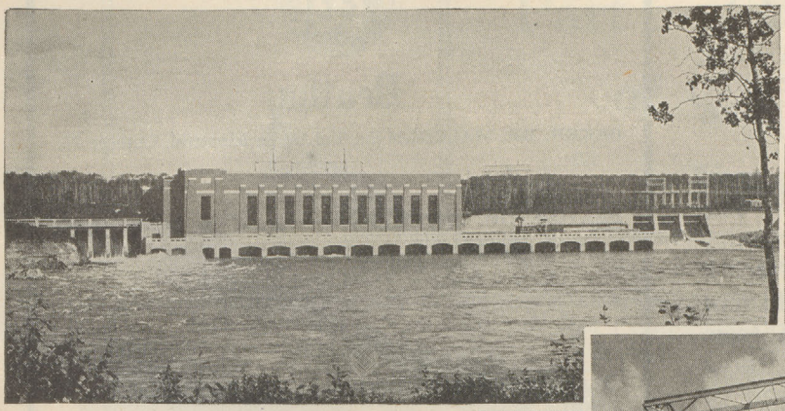
STEWART, DR. CLARENCE JAMES, Arts '15, Med. '18, in Montreal, September 14, 1931.

WALCOTT, DR. EDWARD JULIAN O'NEAL, Med. '12, in Lachine, P.Q., November 29, 1931.

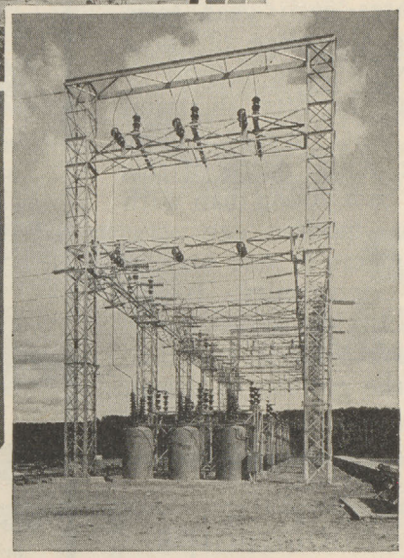
WHITELAW, REV. JAMES MENZIES, Arts '89, at Smithville, Ont., September 11, 1931.

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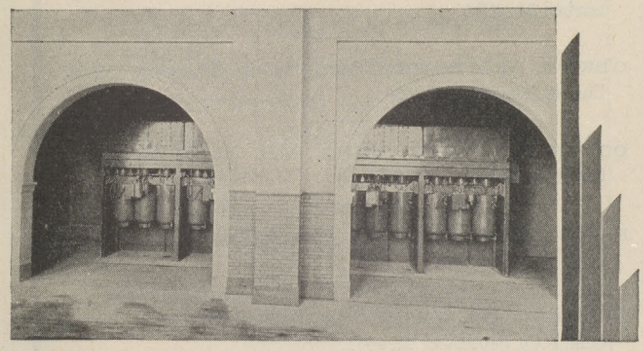


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Athletics

Football

FROM a season marked by the introduction of the forward pass and by sensational last-minute decisions in a high percentage of games, the University of Western Ontario team emerged on November 14 as Intercollegiate champions, with McGill and Queen's tied in second place, and Toronto last. Western nearly threw the championship to Queen's when defeated decisively by McGill on November 14, but on that same afternoon 'Varsity, who had not won a game all year, crushed Queen's in Kingston and restored to the weary Mustangs the championship that had all but slipped from their grasp.

McGill opened the season on September 28, defeating Westward in a game played at night on Molson field by 9–1. Later, on October 3, the Red team avenged the defeat administered last year by Royal Military College by outscoring the cadets 23–5.

On the following Saturday, the Intercollegiate schedule began, with McGill suffering a 7–3 defeat by the University of Western Ontario, in London; and 'Varsity losing by 3–2 to Queen's in Toronto, Queen's winning in the last minute of play when Gilmore, after two failures, drove a placement kick over the Toronto cross-bar.

Again on October 17, Toronto lost in the last minutes of play, when, before 8,000 delighted, though rain-soaked spectators at the McGill Graduates' Reunion, Don Young, the McGill captain, caught an onside kick while running at full speed and, without hesitation, kicked the ball out of touch behind the Toronto line, breaking a 6–all tie by one of the prettiest plays seen in years. McGill added another point a moment later and the game ended with the score 8–6. Queen's defeated Western in Kingston that same afternoon by 8–3.

Facing Queen's in Kingston on the following Saturday, McGill's chances were regarded as poor, but the Red team tied the Tricolour at 9–all; while Western, by a last-minute touchdown on a forward pass, was defeating 'Varsity in Toronto by 6–4. Again on October 31, Queen's clashed with McGill, this time in Montreal; and Varsity faced Western in London. McGill led at half-time, but Queen's won 5–4; and Western beat Toronto by 10–2.

On November 7, McGill travelled to Toronto and, for the second time, beat 'Varsity a few moments before the final whistle sounded. Two minutes from the end of play, with the score tied at 3–all, Toronto had the ball deep in McGill territory and the crowd sat back waiting for what seemed the inevitable Toronto score. In a flash, the situation changed. A Toronto back fumbled at mid-field, McGill secured the ball, Krukowski shot a long forward pass to Hammond, who swerved past a Toronto back and raced over the 'Varsity line for a touchdown. McGill 8, Toronto 3. And while all this was happening, Western moved into the league-leading position by defeating Queen's 3–2.

Inspired by the win in Toronto, McGill played sensational football on November 11 against the M.A.A.A. team, who previously had won the Interprovincial championship. McGill nearly won the game, but M.A.A.A., with their first defeat of the year threatening, loosed a crashing offensive and changed an adverse score into a winning tally of 22–17. Though defeated, McGill had the satisfaction of scoring more points against M.A.A.A. than any other team had scored this year.

Saturday, November 14, brought the Intercollegiate season to a close and provided followers of football with something to talk about for years, for Western, with the championship within their grasp, visited McGill and were decisively beaten. There was no doubt about the superiority of McGill, whose 9 points, to Western's 1, were abundantly earned by the whole team, with Doherty's work as the outstanding feature. Yet, to the delight of the crowd, Western lost the game, but won the championship, for, not long before the final whistle blew, a wire from Kingston announced that 'Varsity had unexpectedly defeated Queen's by 17–0. Facing the Western team as they trekked somewhat dejectedly off the field, therefore, was the score-board which insisted that, despite the circumstances of the moment, they *were* the champions of 1931. And on their championship, earned fairly on the season's play, *The McGill News* offers warm congratulations.

English Rugby

For the fifth year in succession, the McGill English Rugby team holds the Intercollegiate championship, by virtue of 19–0 and 27–0 victories in home-and-home games with the University of Toronto. McGill's superiority this year was even more marked than it has been in the past.

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Soccer

'Varsity regained the Intercollegiate soccer title on October 24 by defeating McGill in Toronto by 2–1. The winning goal was scored only one minute before the game ended.

Track and Field

McGill retained the Canadian Intercollegiate Track and Field Championship by defeating Toronto and Queen's at Molson Stadium on October 16. Despite bad weather, Phil Edwards broke the record for the mile, set by Campbell of Toronto 19 years ago; and Sampson broke the half-mile mark, held jointly by Legge of McGill and Mitchell of Toronto. Edwards's time for the mile was 4 minutes 31 seconds; and Sampson's for the half-mile was 1.58 3/5. Total scores were McGill 64, Toronto 52, Queen's 10. McGill gained additional points next day, at half-time of the 'Varsity football game, when the relay team clipped one second off the intercollegiate record for the mile, defeating 'Varsity and Queen's by a wide margin.

Intermediate Track Championship

Inspired by the feats of the Senior Squad a week before, the McGill second team swept to the Eastern Intermediate Intercollegiate Track and Field Championship on October 23, defeating Royal Military College at Molson Stadium by 89–45. McGill won one–two in all the dashes up to and including the half-mile, took first and second places in the 220 low-hurdles, and won four other events, three in the field. R.M.C. provided the individual champion, Ward winning several events and breaking by 3 3/5 seconds the record in the 1-mile run.

Inter-Faculty Track Meet

Four McGill track records fell in the 59th University annual inter-faculty track meet held in the Molson Stadium on October 9. Phil Edwards ran the quarter-mile in 50 4/5 seconds, one second faster than J. C. Morrow ran in 1904. The fast British Guianian scored again for Medicine by knocking 10 seconds off the 4 minute 36 second time for the mile made by J. C. Kemp in 1908. Kemp, who attended the meet, saw another of his records fall when Sampson, a freshman in Law, ran the half-mile in 1.59 1/5. R. C. J. Goode, formerly of Cambridge University, contributed to the record-breaking by clipping 23 1/5 seconds off the time for three miles. The meet was won by the Faculty of Engineering.

Harriers

McGill's Harrier Team tied in points with 'Varsity and led all other conpetitors in Toronto on November 7. Intercollegiate rules do not provide for the settlement of a tie, but A.A.U. rules award victory in such circumstances to the team whose runner finished first. Goode, of McGill, won the race, and it is believed that the Intercollegiate title will accordingly be awarded to McGill for the first time in eleven years. Four days later, the Harriers further distinguished themselves in Montreal by winning for the second year in succession the Dunlop Trophy, emblematic of the championship of the Province of Quebec.

Tennis

For the first time, University of Montreal won a Canadian Intercollegiate championship when at Kingston, in mid-October, the French students swept all tennis opposition aside and amassed 16 points to McGill's 10, 'Varsity's 2, Queen's 2, and Royal Military College's 0. McGill's congratulations were promptly forwarded to the Athletic Board of the University of Montreal and were received in time for a return message of good-will to be announced by radio at half-time of the McGill-Toronto football game.

Rowing

For the fourth year in succession, University of Toronto triumphed in the 2-mile intercollegiate boat race, defeating McGill on the Lachine Canal on October 17 by three lengths. Toronto outweighed McGil and soon after the race began it became clear that the blue was superior. The time was 12.10, creditable enough under the miserable weather conditions that prevailed.

Hockey

The hockey season is under way as this issue of *The News* goes to press and the McGill team, having defeated Victorias, Canadiens, University of Montreal, and M.A.A.A. in succession, is making a strong bid to retain the Provincial Championship won last year.



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Births

ANDERSON—In Montreal, on August 14, to A. Gordon Anderson, Sci. '21, and Mrs. Anderson, a son.

ASTWOOD—In Montreal, on October 28, to Dr. E. Millard Astwood, Arts '27, Med. '31, and Mrs. Astwood, twins, a son and a daughter.

BOURKE—In Montreal, on October 22, to George W. Bourke, Arts '17, and Mrs. Bourke (Beatrice M. Mitchell, Arts '19), a son.

BUSHELL—In Montreal, on October 4, to Dr. Winston C. Bushell, Dent. '25, and Mrs. Bushell, a daughter.

CASSIDY—At Lewistown, Pa., on August 17, to Dr. Halton C. Cassidy, Arts '17, Med. '20, and Mrs. Cassidy, a daughter.

CROMBIE—In Montreal, on October 19, to Hugh Crombie, Sci. '18, and Mrs. Crombie, a daughter.

DAVIS—In Vancouver, on April 24, to Dr. and Mrs. H. R. L. Davis, (Olea M. Montgomery, M.S.P.E. '26), a son.

DOBELL—In Montreal, on October 1, to F. Curzon Dobell, Arts '19, Law '22, and Mrs. Dobell, a daughter.

DORKEN—In Montreal, on October 5, to H. R. Dorken, Sci. '18, and Mrs. Dorken, of St. Lambert, Que., a daughter.

DOWD—In Montreal, on August 14, to Dr. K. E. Dowd, Med. '23, and Mrs. Dowd, a daughter.

HAMPSON—In Montreal, on September 6, to Harold R. Hampson, Arts '24, and Mrs. Hampson, a son.

HYAMS—In Montreal, on October 19, to Dr. Bernard Hyams, Dent. '21, and Mrs. Hyams, a son.

JAMIESON—In Wingham, Ont., on October 19, to Dr. W. D. S. Jamieson, Med. '21, of Brussels, Ont., and Mrs. Jamieson, a son.

JEKILL—In Montreal, on May 10, to Dr. Victor Jekill, Dent. '26, and Mrs. Jekill, a son.

KELLY—At Cornwall, Ont., on September 3, to Dr. M. A. Kelly, Med. '28, and Mrs. Kelly, a daughter.

LAIDLEY—In Montreal, on August 24, to Wendell H. Laidley, Sci. '23, and Mrs. Laidley, a son.

LANK—In Montreal, on October 19, to Dr. H. H. Lank, Dent. '22, and Mrs. Lank, a son.

MACAULAY—In Montreal, on September 24, to Douglas L. Macaulay, Arts '14, and Mrs. Macaulay, a son.

MACKEEN—In Halifax, N.S., August 25, to Dr. R. A. H. Mackeen, Med. '24, and Mrs. Mackeen (Catharine Wilson, B.Sc. '22), a son.

MacLEOD—In New Glasgow, N.S., on May 15, to John W. MacLeod, Sci. '14, and Mrs. MacLeod, a daughter.

MacRAE—In Montreal, on August 26, to Dr. Donald MacRae, Sci. '23, and Mrs. MacRae, a son.

McDONALD—In Montreal, on September 22, to Dawson A. McDonald, Arts '15, Law '20, and Mrs. McDonald, a daughter.

MICHENER—In Kampala, Uganda, on May 26, to Dr. R. B. Michener, Med. '28, of Friends' Mission Hospital, Kisumu, Kenya Colony, and Mrs. Michener, a son.

MURRAY—At Brockville, Ont., on October 31, to C. Ivan Murray, Sci. '13, and Mrs. Murray, a son (still-born).

NAYLOR—In Montreal, on October 4, to Rev. R. Kenneth Naylor, Arts '06, and Mrs. Naylor, a son.

PERRAULT—In Montreal, on September 11, to Jean Julien Perrault, Arch. '15, and Mrs. Perrault, a daughter.

PONDER—In Montreal, on August 22, to Mr. and Mrs. A. O. Ponder (Sally S. Cameron, Arts, '20), a daughter.

POWER—In Montreal, on September 17, to Dr. R. M. H. Power, Med. '20, and Mrs. Power, a son.

ROSS—In Montreal, on September 19, to Dr. Graham Ross, Arts '10, Med. '13, and Mrs. Ross, a son.

SHAPIRO—In Ottawa, on August 28, to Dr. Charles E. Shapiro, Med. '22, and Mrs. Shapiro, a daughter.

SNETSINGER—At Cornwall, Ont., on August 26, to W. L. G. Snetsinger, past student, and Mrs. Snetsinger, a daughter.

SOUTKIN—In Vancouver, on October 16, to Mr. and Mrs. John Soutkin (Blanche Balkwell, Arts '14), a daughter.

TALLON—At Cornwall, Ont., on October 7, to Dr. J. A. Tallon, Med. '19, and Mrs. Tallon, a son.

TIMMINS—In Montreal, on October 19, to Leo H. Timmins, Sci. '24, and Mrs. Timmins, a daughter.

TREMAIN—At Shawinigan Falls, Que., on August 7, to Kenneth H. Tremain, Sci. '29, and Mrs. Tremain, a son, James Wiggins.

TREMBLE—On August 13, in Montreal, to Dr. G. E. Tremble, Med. '21, and Mrs. Tremble, a daughter.

WALSH—At Hemmingford, P.Q., in August, to Mr. and Mrs. G. Walsh (Dorothy Sangster, B.H.S. '24), a son.

WHEATLEY—In Montreal, on October 14, to Dr. R. A. Wheatley, Dent. '26, and Mrs. Wheatley, a daughter.

WHITEHEAD—In Montreal, on August 29, to Dr. W. I. Whitehead, Dent. '29, and Mrs. Whitehead, a daughter.

WICKSON—In Vancouver, on October 10, to Mr. and Mrs. John Wickson (Gladys Rogers, Arts '14), a son.

WILLIAMS—In Montreal, on August 9, to A. Lyle Williams and Mrs. Williams (Dorothy M. Russel, Arts '23), a son.

Marriages

ALEXANDER—In Montreal, on August 19, Miss Isobel Edmond Alexander, Arts '30, daughter of Dr. W. W. Alexander, Med. '91, and Mrs. Alexander, Montreal, and Max Gideonse, of Highland Park, N.J.

BARCLAY—At Dorval, P.Q., September 21, Isabel M. Barclay, B.A. '31, and Mr. Curzon Dobell.

BINGHAM—In Ottawa, September 9, Lillian Bingham, B. Com. '24, and Dr. George Hutchison.

BRODIE—In Montreal, on October 10, Miss Gwendolyn Davie Brodie, Arts '26, and Arnold Gillies Muirhead, of Kenogami, Que.

BROOKS—At Lachine, Que., on August 18, Margaret Helena, daughter of Dr. J. D. Dixon, Arts '00, and Dr. C. Emerson Brooks, Med. '28.

BUTLER—At Campbellton, N.B., on September 23, Miss Mary Frances MacNichol, and Ernest Warren Radford Butler, Sci. '25, of Winnipeg.

CALDWELL-BENNY—In Montreal, September 12, Marguerite I. Benny, B.A. '27, and Stewart Caldwell, past student, only son of Professor and Mrs. William Caldwell.

CAMERON—In Montreal, on October 9, Miss Elsa Mabel Cameron, past student, and Eric Gentles Louson, both of Montreal.

CAMERON—In September, Katharine Locke Cameron, B.A., '21, and Joseph Alfred Pope.

CHABOT—In Montreal, on August 25, Miss Louise Austin Quintal and Arthur John Chabot, Sci. '25, of Ottawa.

CLARKE—In Kingston, on June 2, Mary Imogene Clarke, B.H.S., '24, and Dr. William Adams Campbell.

CRABTREE—In Montreal West, October 1, Mona Victoria Crabtree, B.A., '30, and Donald Stafford Abbott, of Winnipeg.

DARLING—In Westmount, Que., on October 3, Miss Dora Jean Virtue and Arthur Balfour Darling, Sci. '24.

FISHER—On October 16, at Lachute, Que., Miss Mary Margaret Hope and Dr. Trenholm Lawrence Fisher, Med. '28, of Ottawa.

FITZMAURICE—In Toronto, in October, Miss Kathleen Warren and Dr. Lawrence Wylie Fitzmaurice, Med. '25, of Moncton, N.B.

FRASER—In New York City, on October 31, Mrs. Louise Holmes Knowles and Rev. Daniel James Fraser, LL.D., Arts '90, of Huntingdon, L.I.

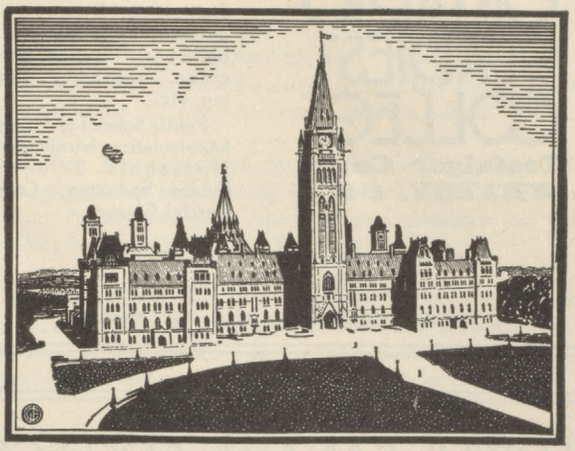
GLASSFORD-SULLIVAN—In Montreal, in August, Norah E. N. C. Sullivan, B.A. '29, M.A. '31, and Arthur Kenneth Glassford, Arts '28.

GOODALL—At Iroquois Falls, Ont., in September, Miss Margaret Helen Little and Ernest Lorne Goodall, Sci. '25, of Port Arthur, Ont.

GRIGG—In Montreal, on September 14, Miss Ruth Cecilia Grace Bendall and Alex. Phelps Grigg, Arts '16, Law '20, of Montreal.

GROSS-DEWEY—In Montreal, October 3, Kathleen Constance Dewey, past student, and Frederick William Gross, Com. '28.

HARDING—At Los Angeles, Cal., on October 28, Miss Florence Mardi O'Brien, of New York City, and Ernest W. Harding, Med. '26, of Los Angeles.



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HENRY—At St. Hilaire, Que., on September 8, Miss Ethel Plant Henry, Arts '16, of Westmount, and Malcolm Sheraton Kuhring, of Ottawa.

HILL—In Montreal, on September 30, Miss Rhoda Arlington Simpson and Dr. Emerson Stanley Hill, Med. '23, of New York City.

HYDE—In New York, on August 4, Miss Varina Moore Rhodes and Duncan Clark Hyde, Arts '17, of University, Virginia.

IRWIN—In Vancouver, B.C., September 18, Marion Lenora Irwin, M.Sc. '28, and Mr. Ian Douglas, of Mount Newton, Cross Roads, Saanichton, V.I.

LE BOUTILLIER—In Charlottetown, P.E.I., on September 14, Miss Helen Stewart and William P. C. Le Boutillier, Sci. '28, of Kenogami, P.Q.

LOUGH-MABON—In Montreal, on October 3, Miss Gwendolyn Elizabeth Mabon, Arts '27, daughter of the late James Mabon, Arts '84, to Dr. Hubert Oberlin Lough, Med. '27, all of Montreal.

MACKENZIE-FAIRBAIRN—In Montreal, on September 12, Jean R. Fairbairn, B.A. '27, and Maxwell H. W. Mackenzie, Comm. '28.

MACLEAN—In Kamloops, B.C., on August 5, Miss Margaret Jean Wilson and Hugh Allan Maclean, Arts '24.

MARSHALL-HODGSON—In Westmount, P.Q., on June 26, Margaret Meredith Hodgson, Teachers '28, and W. B. Hamilton Marshall, Agr. '28, of Abbotsford, P.Q.

McGERRIGLE—At Cushing, Que., on September 12, Miss Flora May Innes, and Dr. Harold William McGerrigle, Arts '27, of Hanover, N.H.

McLEOD—At Danville, Que., on September 1, Miss Ruby May Macdonald and Dr. Clarke Kenneth McLeod, 'Med. 26, of Montreal.

MITCHELL—At London, Ont., in September, Miss Jean Florence Kathleen Bamford, and Homer Dean Mitchell, M.C., Agr. '15, of Ottawa.

MITCHELL—On September 29, 1931, Miss Jane Graham, of Halifax, N.S., and George MacG. Mitchell, Sci. '22.

MONTGOMERY—In Montreal, in October, Miss Anna Gladys MacNutt and Edgar Gordon Montgomery, Sci. '08, of Drummondville, Que.

MORRISON—At Arkansas City, Kan., in July, Miss Irene York and Donald McKay Morrison, Ph.D., M.Sc. '22, of Vancouver, B.C.

MURRAY—On September 26, Margaret Eileen Murray, past student, and Walter R. Wonham, of Montreal.

NOAD—At Siena, Italy, on July 4, Miss Anne Preston Dudley and Algy S. Noad, M.A., Arts '19, of Montreal.

PATTERSON—At Locheil, Ont., on September 24, Miss Marion Catherine Chisholm and Kenneth B. Patterson, Sci. '22, of Montreal.

POPLIGER—In Montreal, August 11, Anne Popliger, B.A., '29, and Dr. Arthur Green, of Glace Bay, N.S.

ROCHESTER—At Hawkesbury, Ont., on September 19, Miss Gwen Lawlor and Bertram Cole Rochester, Sci. '23, of Montreal.

RUTHERFORD—In Tacoma, Wash. in October, Miss Marguerite Dober and Dr. Charles Alton Rutherford, Med. '01, of Seattle, Wash.

SHARKEY—At Beachburg, Ont., on August 5, Miss Laura Mildred MacLean and Rev. Norman F. Sharkey, Arts '29, of Sonya, Ont.

SHARP—In Montreal, October 12, Gertrude Florence Sharp, B.A. '29, and Selwyn Irwin.

SIMS—In Ottawa, on August 20, Miss Sylvia McMillan and Dr. Herbert Leo Sims, Med. '06, of Ottawa.

SWAN-HARRISON—In Montreal, in October, Miss Ruth Ellen Harrison, Arts '29, and Andrew W. D. Swan, Com. '29, of Montreal.

TAPRELL—In Edmonton, Alberta, on October 3, Miss Abigail F. Spencer and William Ross Taprell, Com. '23, of Calgary.

TAYLOR—At Renfrew, Ont., on September 12, Miss Myrtle Olga McCourt and Willard Davidson Taylor, Sci. '25, of Toronto.

THOMSON—In Montreal, September 19, Alice Ruth Thomson, B.A. '28, and Robert David Crammond.

WADSWORTH—In Westmount, Que., on October 22, Miss Margaret Alma Benvie and Rev. Dr. Gordon Campbell Wadsworth, Arts '23, of Saint John, N.B.

WATSON-DE BLOIS—In Montreal, on September 1, Miss Madeleine E. De Blois, B.Sc. '27, daughter of W. H. De Blois, B.Sc. '01, and Dr. Edmund E. Watson, Sci. '27, of Queen's University, Kingston, Ont.

WIGHT—On October 31, Miss Lucile G. King, of Kew Gardens, L.I., and Dr. G. Earle Wight, Med. '25, of Godbout, Que.

WILSON—In Ottawa, on September 12, Miss Norah Turrill Macoun and Selwyn Hamilton Wilson, Sci. '22.

WINSLOW—In Montreal, on September 14, Miss Marjorie Scarth Stevenson and Kenelm Molson Winslow, Sci. '21, of Sherbrooke, Que.

WONHAM—In Montreal, on September 26, Miss Margaret Eileen Murray and Walter Richard Wonham, Sci. '22, of Montreal.

Personals

PRESS CLIPPINGS AND NOTES for these columns should be addressed to H. R. Morgan, Esq., Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal.

DR. PATRICK McHUGH WALKER, Med. '98, has been elected mayor of Pasadena, California.

MEDICINE, '98: Honours this year include the following appointments: R. U. Patterson, Surgeon-General, United States Army; W. R. Jamieson, President, Medical and Surgical Association of the Southwest; David Meyers, Major, U.S. Army Medical Corps; W. H. Sihler, Surgeon, M. St. P. and S.S.M. Railway; and D. F. Wood, President, Minnesota Academy of Ophthalmology and Otolaryngology.

MEDICAL GRADUATES OF 1930 at present in California include M. R. Gibbons, jr., now resident in Medicine at Stanford University Hospital; Robert F. Wegge, who is at Southern Pacific Hospital, San Francisco; Robert S. Peers, junior assistant at the School for Tuberculous, in Colfax; John Dunphy, who is practising in Santa Cruz; and John W. Blemer, practising in Chico.

E. R. WYKES, B.Sc. '30, M.Sc. '31, and W. F. Thomas, B.A. '28, B.Sc. '30, arrived recently on the Rand, South Africa, the former joining E. P. Cowles, Sci. '10, who is General Manager of the East Geduld Mines at Springs, in the Transvaal, and the latter joining the staff of the Geduld Proprietary Mines.

DR. HERBERT M. LITTLE, Med. '01, of Montreal, was elected first vice-president of the American Association of Obstetricians, Gynæcologists, and Abdominal Surgeons at the 44th annual meeting of the society held in White Sulphur Springs, West Virginia, in September.

RAIMBAULT DE MONTIGNY, B.Sc. '31, has won a three-year scholarship, donated by the Canadian International Paper Company, for research in cellulose and wood in the Pulp and Paper Research Institute at the University.

BERNARD M. ALEXANDOR, Arts '28, Law '31, has opened an office and is practising law in the Transportation Building, Montreal.

DR. GEORGE SHANKS, Arts '04, Med. '08, scored a hole-in-one at Mississauga this summer, dropping his ball into the cup from the fourteenth tee.

THE WORK IN SCULPTURE of Dr. R. Tait McKenzie, Arts '89, Med. '92, LL.D. '21, was appreciatively reviewed in the August 15 issue of the Paris "Revue Moderne des Arts et de la Vie."

DR. THOMAS F. COTTON, Arts '05, Med. '09, now resident in London, England, was appointed to represent McGill at the 250th anniversary meeting of the Royal College of Physicians, held in Edinburgh recently.

DR. J. A. L. WADDELL, Sci. '82, Honorary Technical Adviser to the Chinese Ministry of Railways, is joint-author of an article on "Aerial Photographic Surveys for China" in the October number of the American "Military Engineer."

RAMSAY TRAQUAIR, Hon. M.A. '23, Macdonald Professor of Architecture, and Gordon A. Neilson, Demonstrator in Architecture, are joint authors of a series of illustrated articles on "The Architecture of the Hôpital Général, Quebec," which appeared this year in the Journal of the Royal Architectural Institute of Canada and now, reprinted, are numbered among the McGill University Publications.

DR. A. D. BLACKADER, Arts '70, Med. '71, M.A. '18, LL.D. '21, is the author of an abstract of a memoir on the life of Lady Osler which appeared in the "Canadian Medical Association Journal" in October.

PROFESSOR J. C. SIMPSON, Secretary of the Faculty of Medicine, was among those who received the honorary degree of LL.D. from Mount Allison University when the new chemistry and biology building was formally opened on October 21.

DR. G. S. WHITBY, Ph.D. '20, formerly Professor of Organic Chemistry at McGill and now Director of the Division of Chemistry, National Research Council, Ottawa, received the honorary degree of LL.D. from Mount Allison University, Sackville, N.B., on October 21.

GEORGE W. BOURKE, Arts '17, of the Sun Life Assurance Co. of Canada, has qualified for fellowship in the Institute of Actuaries, recognized as the senior degree in actuarial work. Only 15 of these fellowships have been awarded to Canadians.

EDWARD N. MARTIN, Sci. '05, has been appointed representative in Canada of the British Steel Export Association, with offices in Montreal.

REV. GEORGE F. LALOND, Arts '20, recently stationed at North Augusta, Ont., is now in charge of the United Church of Canada, at West Shefford, P.Q.

REV. W. P. WORNELL, Arts '15, has been appointed pastor of the United Church at South Mountain, Ont., after having been stationed at Coaticook, P.Q.

REV. R. G. FIANDER, Arts '28, has been appointed assistant at Trinity Memorial Church, Notre Dame de Grace, Montreal.

REV. W. S. HATCHER, Arts '24, has been chosen rector of Huntingdon, P.Q.

REV. B. J. THORPE, Arts '28, has been appointed assistant to Rev. J. F. Morris, Arts '11, at the Church of the Ascension, Outremont, after having been in charge of the parish of Bristol, P.Q.

DR. J. A. M. BELL, Med. '18, of Newcastle, N.B., was recently elected president of the New Brunswick Medical Association.

THE COLONIAL AUXILIARY FORCES OFFICERS' DECORATION has been awarded to Lieutenant-Colonel R. A. Fraser, Arts '15, 2nd Medium Brigade, Canadian Artillery; Lieutenant-Colonel W. B. Howell, Med. '96, C.A.M.C.; and Major J. H. Edgar, Sci. '03, Canadian Engineers.

DR. GEORGE F. STEPHENS, Med. '07, superintendent of the Winnipeg General Hospital, has been elected president of the American Hospital Association for 1932-33, being the first Canadian to hold that office. He has also been elected to the executive of the recently formed Canadian Hospital Council.

HON. WILLIAM JOSEPH PARNELL MACMILLAN, Med. '08, has been re-elected to the Legislature of Prince Edward Island, and has been appointed Minister of Education and Public Health.

DR. A. A. MacDONALD, Med. '02, of Souris, P.E.I., has been elected to the Prince Edward Island Legislature as one of the Conservative members for the First District of King's County.

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DR. KEITH F. ROGERS, M.C., Med. '14, of Beeton, Ont., Medical Officer of Health of Tecumseh Township, has written a book of 70 pages entitled "A Doctor's Advice to His Son" (Ryerson Press, Toronto), dedicated to "Those who follow the Lost Generation of 1914-1918."

BRIGADIER-GENERAL H. F. McDONALD, C.M.G., D.S.O., Sci.'07, of Vancouver, has been appointed a member of the Pensions Tribunal of the Dominion Government.

DR. KEITH O. HUTCHISON, Med. '21, of Montreal, attended the annual convention of the American Academy of Ophthalmology and Otolaryngology, at French Lick Springs, Indiana, in September.

MAJOR D. R. MacLAREN, past student, has been appointed assistant general manager of Canadian Airways, Limited, of Winnipeg. He will have charge of the new Pacific Division of the company.

FRANK B. COMMON, K.C., Arts '13, Law '17, has retired from the presidency of the Lake Superior Corporation, as well as from that of the new holding company, Algoma Consolidated Corporation, Limited, but retains a place on the directorate and is continuing to act as general counsel for the corporation.

DR. S. HANFORD McKEE, Med. '00, of Montreal, has been elected president of the American Academy of Ophthalmology and Otolaryngology, the annual meeting of which was held in September at French Lick, Ind.

PERCY E. CORBETT, Arts '13, Dean of the Faculty of Law, represented McGill at the inauguration of Carleton W. Stanley, M.A., as president of Dalhousie University, Halifax, N.S.

REV. A. W. LOCHEAD, Arts '01, has become pastor of Robinson United Church, London, Ont., for the next nine months. He spent 21 years in mission work in Honan, China, and recently resigned the pastorate of a church in Dauphin, Man.

TREVOR C. THOMPSON, Sci. '19, has been appointed special service engineer on the general commercial staff at Montreal of the Bell Telephone Co. of Canada.

LESEUR B. BRODIE, Sci. '26, has been promoted in the service of the Bell Telephone Co. of Canada, and is now sales manager of the Toronto division.

DR. R. M. H. POWER, Med. '20, has resigned as chief medical health officer of the City of Verdun, P.Q.

DR. ARTHUR E. RIDDELL, Med. '21, recently won the directors' golf trophy at a tournament in Arvida and also captured the club championship trophy. He is medical supervisor of the Arvida General Hospital and has been mayor of the town.

DR. G. GAVIN MILLER, Med. '22, has returned to Montreal after fifteen months' of post-graduate work in surgery in Europe.

THE HON. P. B. MIGNAULT, LL.D., Law '78, has become associated with the Montreal law firm of Foster, Hackett, Mulvena, Hackett and Foster as counsel.

ROBERT I. C. PICARD, Arts '31, of Westmount, has been awarded the Imperial Order, Daughters of the Empire post-graduate scholarship (overseas), for the province of Quebec for 1931, and will study economics at the University of London.



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HOWARD W. MATHESON, M.Sc., Arts '11, vice-president in charge of research of Shawinigan Chemicals Limited, has been appointed an honorary member in the Society of Chemical Industry.

OLIVER HALL, M.Sc., Sci. '23, has resigned as superintendent of mines for the International Nickel Company, and will establish a consulting practice in Toronto. He will remain as consultant to the company.

COLONEL HAMILTON GAULT, past student, has been re-elected to the British House of Commons, as Conservative member for Taunton, Somerset. Lt.-Col. Maurice Alexander, Law '10, was the unsuccessful Labour candidate in Newcastle-upon-Tyne East.

"THE BIBLE IN SCOTLAND" (London: John Murray) is the latest publication of Sir Andrew Macphail, LL.D., Arts '88, Med. '91. The book has attracted much attention.

ROBERT S. O'MEARA, Com. '21, formerly in charge of the office of the Canadian Trade Commissioner in Chicago, now closed, has been transferred to Athens, Greece. He sailed on October 30 from Montreal to assume his new duties.

REV. DR. ANGUS A. GRAHAM, Arts '94, has joined the staff of Regina College as director of religious education.

DR. FRANK D. ADAMS, Sci. '78, has been appointed district commissioner of the Boy Scouts' Association, Montreal, after having been identified with the organization since 1911, for five years as its president.

DR. A. S. MORRISON, Med. '00, of Montreal, has been elected to the Board of Governors of the International Association of Police and Fire Surgeons and Medical Directors of Civil Service Commissions. He is a surgeon of the Montreal Fire Department.

DR. CHARLES F. MARTIN, Arts '88, Med. '92, Dean of the Faculty of Medicine, and Dr. F. M. G. Johnson, Sci. '04, Dean of Science, represented McGill at the annual meeting of the Association of American Universities held at the University of North Carolina, in November.

HARRY BATSHAW, Law '24, of Montreal, has been elected president of the nation-wide organization known as Canadian Young Judaea.

REV. ARTHUR B. B. MOORE, Arts '28, has been inducted into the pastorate of Amherst Park United Church, Montreal.

DR. BRUCE P. WEBSTER, Med. '26, has been appointed Associate Professor of Medicine at Tulane University, New Orleans, after spending two months in Europe engaged in post-graduate study.

S. F. KNEELAND, Arts '12, of the Westmount High School, has been elected president of the Provincial Association of Protestant Teachers of Quebec.

Alumnæ Notes

The following standing committees and study groups have been appointed by the Alumnæ Society as a result of the questionnaire sent to all members last session:—Committee on the Canadian and International Federations of University Women; Committee on Endowments and Loans; Social Service Committee; Committee on Undergraduate Affairs; Building Committee; Membership Committee; Record and Publicity Committee; Committee on Educational Interests; Open Forum Group; Modern Literature Study Group; Group for the Study of French.

The Executive wishes to make these committees and groups as large as possible, and, since it is impossible to approach each person individually, members are urged not to await a special invitation, but to ally themselves immediately with one or more groups. Suggestions and criticisms will be welcomed by the Executive.

The McGill Women's Association, of Vancouver, B.C., held its annual meeting on Monday, October 5. The following officers were elected: President, Mrs. Cecil Buck; Vice-President, Mrs. Clarence Regan; Secretary, Mrs. E. A. B. Kirkpatrick; Treasurer, Mrs. F. G. Flesher; Executive, Miss McNiven, Miss Cora Brehaut, Mrs. John Soutkin.

1903—MRS. G. S. RAPHAEL (Euphemia McLeod) has been elected President of the Parent-Teacher Federation of Vancouver.

1910—HELEN MCEWEN has returned to Toronto after spending six months in England and on the continent.

1913—MRS. GEORGE PAINE (Sadie Munro) is now living in Penticton, B.C. She has been visiting her mother in Vancouver for a month this fall.

ALICE KEENLEYSIDE, Principal of the St. Clare School for Girls, Vancouver, B.C., was an interesting and delightful speaker at the University Women's Club, in Vancouver, recently. Her address was entitled "A Week-Ender in Japan and China."

1914—HELEN WILLIS has returned for a short time from China, where she is engaged in educational work among the Chinese, and has been visiting in Montreal and Toronto.

1923—JOAN FOSTER, who obtained the Oxford degree of B.A., with First Class Honours in History, in 1927, proceeded to the degree of M.A. at Oxford this summer.

1924—MRS. CHARLES D. EVANS (Phyllis M. Murray) is now residing in Montreal.

1927—PAULINE MORRISON is attending the Library School at McGill this year.

1929—JANE HOWARD has returned to Montreal from Oxford, where she received her B.A. degree.

RUTH PELTIER is attending the Library School at McGill this year.

1930—ISOBEL ROWAT and ALICE PROWSE, after spending last winter in Paris, are now continuing their work in French at McGill.

DOROTHY BELL is attending the Library School at McGill.

1931—MARGARET MILLIGAN has been awarded a French Government Scholarship and is spending the year studying in France.

HELEN CANNELL, President of R.V.C. '31, is now living at 3450 Osler Ave., Vancouver, B.C., and is teaching English in St. Clare School for Girls.

Lost Addresses

Any information in regard to the graduates listed below will be welcomed by the Executive Secretary of the Graduates' Society.

GRAD. '57—Gordon J. Emery, M.D.
GRAD. '59—Walker H. Marr, M.D.
GRAD. '60—Rev. John Kennedy, B.A.
David Woods, M.D.
GRAD. '62—Robert H. Atkinson, M.D.
GRAD. '63—Franklin Goforth, M.D.
GRAD. '64—Donald Baynes, B.A.
Rev. Archibald Duff, B.A.
John N. Muir, B.A.
Auger Carey, M.D.
GRAD. '66—Benjamin F. Burch, M.D.
GRAD. '67—David M. Cassidy, M.D.
W. McCarthy, M.D.
Wm. McGeachy, M.D.
GRAD. '68—Francis X. Moore, B.A.
Edwin D. Ault, M.D.
John H. Wye, M.D.
GRAD. '69—Victor A. Clement, M.D.
James H. Hammond, M.D.
John Meane, M.D.
A. R. Lewis, B.A.
Henry Russell, B.A.
GRAD. '70—Wm. Lovett, M.D.
GRAD. '72—Wm. Robert Nichol, M.D.
GRAD. '73—James G. Allan, B.A.
GRAD. '74—Archibald D. Taylor, B.A.
Henry W. Thomas, B.A.
GRAD. '75—George C. Duncan, M.D.
GRAD. '76—Wm. H. Gray, B.A.
Donald Baynes, M.D.
F. G. B. Clarke, M.D.
Thomas A. Greer, M.D.
James B. Johnson, M.D.
Reuben Levi, M.D.
Arthur Storrs, M.D.
GRAD. '77—Jas. T. Farley, M.D.
GRAD. '79—Billa Flint Butler, M.D.
GRAD. '88—Albert L. Castleman, M.D.
Howard D. Fritz, M.D.
Wesley M. Lang, M.D.
A. John McDonnell, M.D.
Alfred E. Orr, M.D.
Alex. G. Robertson, M.D.
GRAD. '86—Wm. A. Fyles, B.A.
Wm. Herbert Evans, B.A.
Edgar deF. Holden, B.A.
Wm. E. Wallace, B.A.
N. P. Yates, B.A.
GRAD. '87—Walter Fred Ferrier, B.Sc.
GRAD. '89—Thomas McCurdy, M.D.
GRAD. '91—Alexander Dewar, M.D.
Miles M. Martin, M.D.
George R. Shirriff, M.D.
Charles A. Turnstall, M.D.
Wm. P. Williamson, M.D.
GRAD. '93—Dr. MacKenzie

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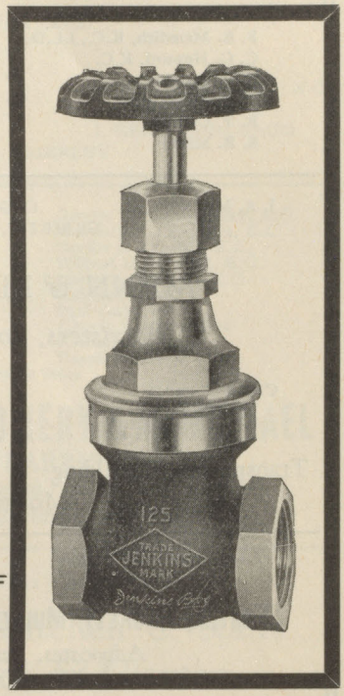


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GEORGE M. HILARY, B.Sc.
JOHN D. MACKERRAS, B.Sc.
JAMES H. SCOTT, B.Sc.
LEONARD E. L. THOMAS, B.Sc.

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HERBERT W. EWAN, B.Sc.
RICHARD T. GOUGH, B.Sc.
IRA. G. HEDRICK, B.Sc.
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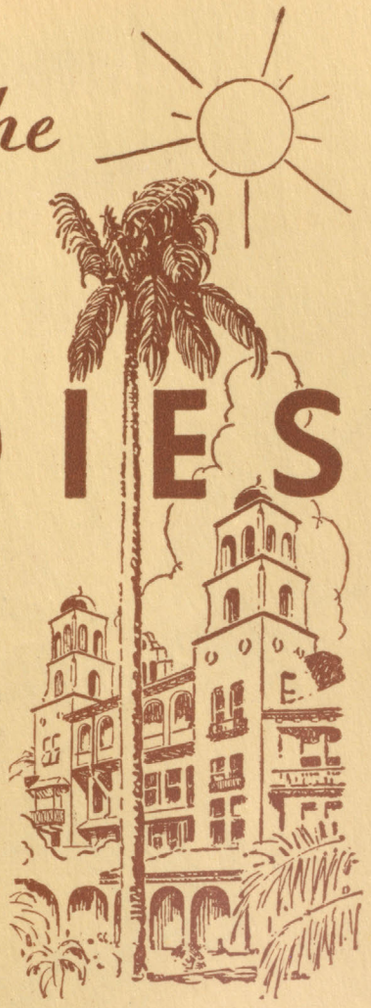
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by W. B. Howell

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by Dean A. S. Eve

THE McCORD NATIONAL MUSEUM
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THE CANADIAN RAILWAY PROBLEM
by Gordon McL. Pitts

THE EARLY DAYS OF THE MONTREAL GENERAL HOSPITAL
by H. E. MacDermot

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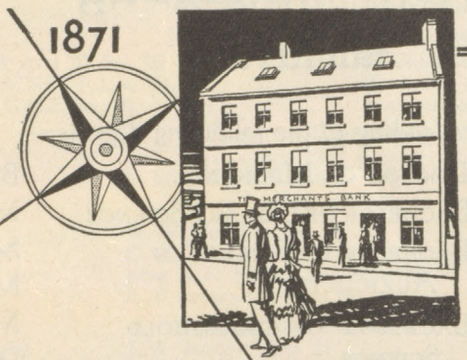
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The Bureau gives free information and assistance to all graduates and past students, and helps employers to secure the personnel they may desire.

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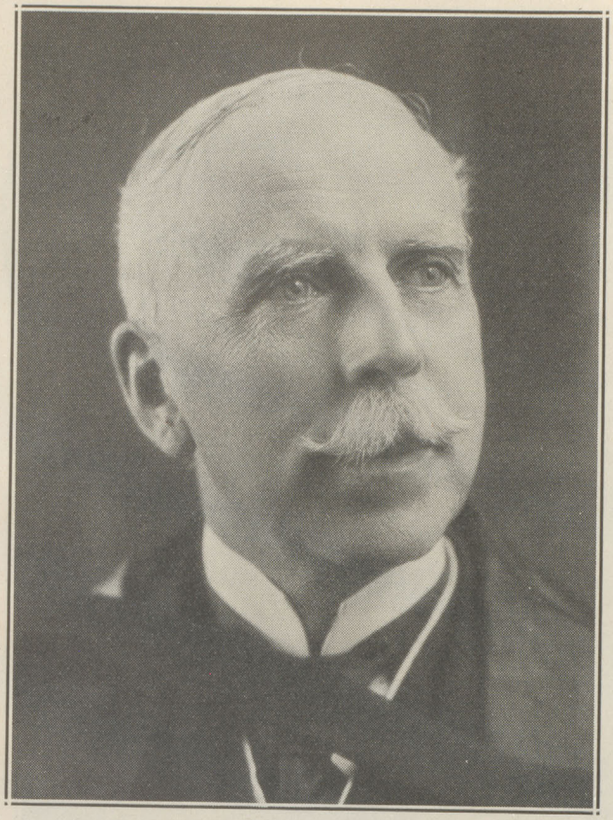
The Faculty of Graduate Studies and Research

By DEAN A. S. EVE

THE Faculty of Graduate Studies and Research at McGill University consists of the Principal, the Dean, a Vice-Chairman, 80 professors, and 250 graduate students.

The object of the Faculty is to promote original investigation and research and to give advanced courses and other opportunities to selected students, who have a Bachelor's degree, with a view to the achievement of a higher standard of knowledge and scholarship. It awards the degree of Master, either of Arts, Science, Engineering, or Commerce, to those who have passed suitable examinations and written a thesis, which must in some measure be a contribution to knowledge and must also be written in good literary style. Successful theses are deposited in the McGill Library and are there for all the world to see!

After three years of graduate study and research, students may proceed to the degree of Doctor of Philosophy, having passed severe examination tests and written a thesis "which



DR. F. D. ADAMS

First Chairman of the Graduate School, 1906-1912, and Dean of the Graduate Faculty 1922-1924.

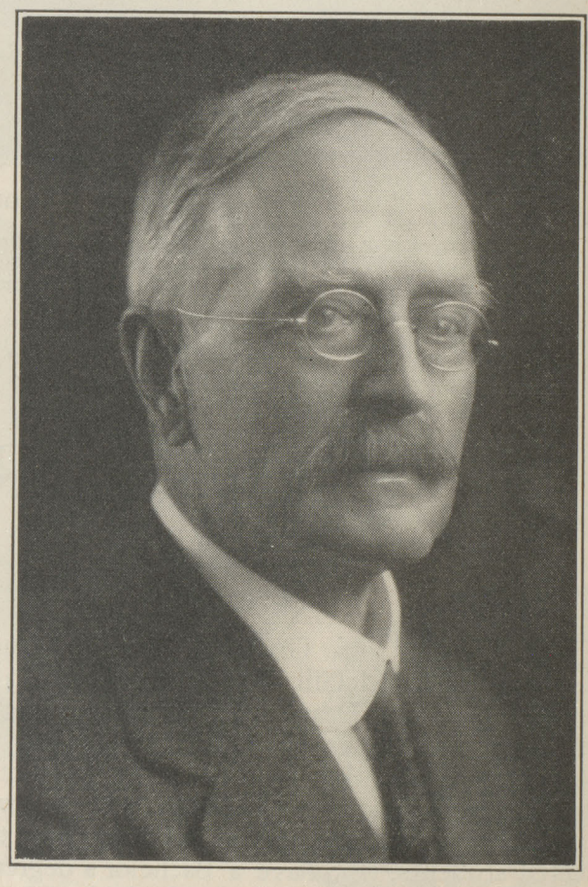
must display original scholarship expressed in satisfactory literary form and be a distinct contribution to knowledge." In order to ensure that this qualification is satisfied, there are two examiners, one of whom is a leading authority on the subject of the thesis, but is not a member of McGill University. The highest degrees awarded are those of Doctor of Civil Law (D.C.L.), of Literature (D.Litt.), of Science (D.Sc.), and of Music (Mus. Doc.). These are not awarded to other than McGill graduates, resident study is not required, there are no examinations, but a candidate must submit the whole of his published works to competent examiners, one of whom must be at some university other than McGill. A very high standard is necessary for these degrees.

Early History

In the session 1905-6, the Principal of McGill University, Sir William Peterson, appointed a committee to report on "Higher Degrees." Dr. F. D. Adams was convener and chairman and his colleagues were Professors Colby, Coussirat, Gregor, Harrington, Lafleur, Rutherford, Scott, Taylor, Tory, and Walker. The report they issued is of great interest and showed that between 1891 and 1901 the English-speaking people of Quebec Province had increased from 292,000 to 327,000, while the French-Canadians had increased from 1,200,000 to 1,300,000; this indicated that the supply of students at McGill University, drawn from the Province of Quebec, was not likely to increase rapidly. On the other hand, it was shown that American universities were granting higher degrees on a large scale, awarding doctorates at the rate of 300 a year, and that Canadian graduates were going to the United States in considerable numbers, so that in 1905-6 there were about 60 such students.

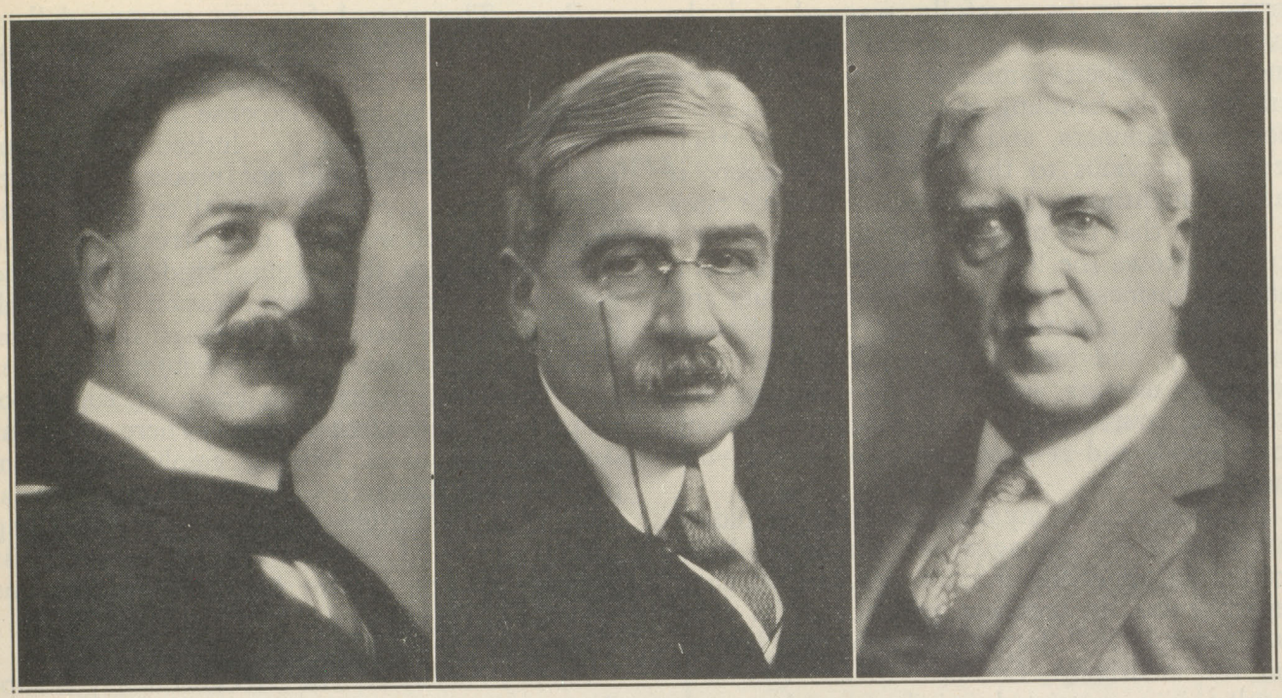
So the indications were clear enough; McGill should not aim at large numbers but at excellence and quality, and that a graduate school should be founded which might draw students from the whole of Canada, not merely from the Province of Quebec.

The new Graduate School was started in October, 1906, and I note that the present Vice-Chairman, Dean F. M. G. Johnson, was one of the first candidates to send in his application form for the Ph.D. degree. Other early candidates



DR. A. S. EVE

Dean of the Faculty of Graduate Studies and Research since 1930.



DR. F. C. HARRISON
Dean of the Faculty of Graduate Studies and Research, 1928-'30.

DEAN G. LAING
Chairman of the Graduate School, 1921-'22.

THE LATE DR. R. F. RUTTAN
Dean of the Faculty of Graduate Studies and Research, 1924-'28.

were R. P. D. Graham, D. S. McIntosh, Miss McLeod, R. W. Boyle, and J. A. Bancroft. Not a bad start!

The Graduate School was wholly administered by a Committee working with the Heads of Departments, and the most energetic members seem to have been Professors Adams, Colby, Durley, Harkness, Rutherford, Scott, and Taylor.

One point must ever be remembered, there was no financial grant, no added expenditure. Suddenly a large body of professors found themselves, and still often find themselves, burdened with very severe extra burdens in organization, research, and teaching, without any increases in salaries or any additions to staff. Since every graduate student is, as it were, equivalent to a whole class of undergraduates, the extra work and responsibility are severe and large. There were, and are, great compensations. The professors are brought into contact with vigorous and enthusiastic minds, anxious to be abreast with the very latest books, ideas, developments, and discoveries, so that the graduate students, particularly when there are many in a department, act as a stimulus to one another, and the reaction between professors and students is wholesome and intimate.

Subsequent History

In December, 1908, a change was made and a Faculty of the Graduate School was instituted, not without discussion. Some wanted each department to have sole charge of its own higher degrees, somewhat after the Oxford fashion; others desired that they should be administered by the respective Faculties, Arts, Applied Science, Medicine; while the majority favoured a Faculty of Graduate Studies, after the plan followed at Cambridge University and at all universities in the United States. The present writer, after twenty-five years of experience with the Graduate School, and subsequent Graduate Faculty, ventures, without any bias, to endorse strongly the existing scheme.

In 1922, Sir Arthur Currie, Dean Laing, Dr. Adams, and others, drew up a scheme, approved by Corporation and the Governors, whereby the Graduate School, under a Chairman and Executive Committee, became the "Faculty of Graduate Studies and Research" with Dr. F. D. Adams as the first Dean. In 1929, under the régime of Dean Harrison, a wholesome subdivision was made into an Arts Division and a Science Division, with separate executive committees, together with an executive committee of the Faculty as a whole. The Faculty therefore meets but two or three times a year, and with a capable secretary the organization works smoothly enough, except at two periods of the year—in October when 250 to 300 application

forms have to be carefully scanned and the qualifications of every student minutely weighed; and in May when examination returns are plentiful, when the handling of theses, their distribution to examiners, and the collection of their reports, previous to the May Convocation, is rather a nightmare. Sometimes and in some cases it appears that the more learned a professor or a student grows the less capable he becomes as a man of business, and the labour of deans and secretaries is infinitely increased by those who lose, delay, and forget! After all, efficiency in every day matters, and in business matters, is a grace and courtesy at least as precious as loving your friends and at least as easy as loving your enemies.

If I were critical, my other comment would be that some of my colleagues are a little too kind-hearted in admitting inferior students to their departments. In common parlance, it is their own funeral, and they have to be the bearers and the mourners! Entrance to the Graduate Faculty is a restricted privilege; perhaps ten per cent. of the existing students could be weeded out with advantage to themselves and to the Faculty, even after the rather large rejections for admission have been made. That is a small percentage however in any human effort.

Worse still, there are a few, a very few, who consider that a student, after so much effort in courses and thesis, should have his reward of a higher degree.

This is a grave heresy! The award of a higher degree to an unfit student is a tarnish, a bar sinister, on the McGill escutcheon, and a nail in the coffin of the department, and the funeral should not be unduly postponed.

Fees: The annual fees are seventy dollars, much less than for any other faculty, but it must be remembered that graduate students have already faced the heavy expense of four or more years of undergraduate life. Indeed many of our graduate students could not proceed to higher degrees were it not for partial employment as assistants, demonstrators, or instructors. Then there are various fellowships, studentships, and bursaries awarded by the National Research Council, which have been an inestimable boon to the holders, and to the Dominion, which is now beginning to have an adequate supply of properly trained scientific men. There are about sixty-five graduates holding emoluments from the National Research Council, Rhodes Foundation, 1851 Exhibition Fund, Moyse Travelling Scholarship Fund, and the like. A complete list of these for the current session completes this report.

Library Facilities: The McGill Library is supplemented in several cases by admirable departmental libraries (Chemistry, Medical, Physics, etc.). Nevertheless there is a shortage of space for graduate students in the Main Library, and in some cases more material is needed for Ph.D. students; for example, in History and in Mathematics. Dr. Lomer is ever ready to give every help in his power, but there are limitations as to space and money.

Endowment: The Faculty of Graduate Studies and Research has no endowment. A million dollars in trust by the Faculty, without any restrictions as to expenditure, would be a wholesome beginning and a fine investment.

SUBJECTS

Here is a menu for the candidates selection:—

TABLE NO. 1

Group I ARTS	*Group II* SCIENCE	*Group III* ENGINEERING	*Group IV* BIOLOGY & MEDICINE	*Group V* MACDONALD COLLEGE
1. Classics	1. Botany	1. Civil Eng.	1. Anatomy	1. Agr. Bacter.
2. Economics	2. Chemistry	2. Electrical Eng.	2. Bacteriol.	2. Agr. Chem.
3. Education	3. Geology	3. Mechanical Eng.	3. Biochem.	3. Agronomy
4. English	4. Physics	4. Metallurgical Eng.	4. Medicine	4. Entomology
5. Germanic Lang.	5. Zoology	5. Mining Eng.	5. Pathology	5. Plant Path.
6. History			6. Pharmacol.	6. Animal Production
7. Mathematics			7. Surgery	
8. Oriental Lang.				
9. Philosophy				
10. Psychology				
11. Romance Lang.				
12. Sociology				

NUMBER OF STUDENTS

Here is a statement, (Table II), showing the Chairmen, the Deans, and the number of students in the Graduate Faculty, and the number of degrees awarded. The records from 1910-20 are not complete, and it is wise to eliminate inaccurate statistics. The depreciation of higher learning as a result of the Great War is clearly indicated. The Faculty had to be born again in 1920.

TABLE NO. II

CHAIRMEN

Dr. F. D. Adams.....1906–12
Dr. J. Harkness.....1912–20
Dr. H. M. MacKay.....1920–21
Dean G. Laing.....1921–22

DEANS

Dr. F. D. Adams.....1922–24
Dr. R. F. Ruttan.....1924–28
Dr. F. C. Harrison.....1928–30
Dr. A. S. Eve.....1930–

STUDENTS REGISTERED				DEGREES AWARDED			
YEAR	MASTER	PH.D.	TOTAL	MASTER	PH.D.		TOTAL
1906–7	23	7	30	12			12
1907–8	36	8	44	14		2 D.Sc.	16
1908–9	55	11	66	18	1		19
1909–10	69	16	85	24	3		27
1910–11	Records incomplete			15			15
1911–12	" "			19	1	1 D.Sc.	21
1912–13	" "			20	1		21
1913–14	" "			5			5
1914–15	" "			1		1. D.Sc.	2
1915–16	" "			14	1		15
1916–17	" "			8	2		10
1917–18	" "			8		1 D.C.L.	9
1918–19	" "			4			4
1919–20	" "			8		1 D.Sc. 1 L.L.M.	10
1920–21	32	10	42	26			26
1921–22	58	11	69	17	1	1 L.L.M.	19
1922–23	58	22	80	25	7		32
1923–24	105	17	122	48	4	1 Mus. D.	53
1924–25	98	31	129	51	7	1 D.Sc.	59
1925–26	100	36	136	59	7		66
1926–27	98	40	138	43	10	1 D.Sc.	54
1927–28	130	47	177	64	12		76
1928–29	100	53	153	56	20		76
1929–30	112	56	168	56	15	1 Mus. D.	72
1930–31	167	70	237	67	13		80

Macdonald College

It must be remembered that Macdonald College is a part of McGill University. The generous founder aimed at a School for Teachers, an Agricultural College, and a School of Household Science, and there was a lavish gift of land and buildings for the triple purpose, even if the endowment of salaries for professors has proved inadequate. But there was a fourth purpose, which in the long run may prove the most important. There was to be investigation and research work in order to improve animal and crop production both in quality and kind, and to remove the innumerable foes which hamper the farmer at every turn. For the crops, the stock, and the forests of Canada, as of other countries, are subject to an incalculable toll of loss by insects, by fungi, and by subtle poisons, which can only be controlled by constant vigilance, increased knowledge, and scientific research.

By skilful breeding it is possible to raise new crop varieties resistant to disease, less liable to destruction by frost, more prolific in yield. The relation between crop and soil, and the correct use of fertilisers can be slowly determined by bitter experience, but there are quicker roads when scientific methods are applied. All these

McGill University Library

matters cost money, but the return on the investment is sure and swift.

It is definitely an ambition of Macdonald College to achieve a leading rôle in such work, a promising beginning has been made, success brings more money, and money brings more success.

There is a band of intelligent and well trained young graduate students at Macdonald College who are working enthusiastically with their professors and are already in the van of progress. It is possible but undesirable to particularise. Such men will ultimately take leading places in the Experimental Farm at Ottawa, and in the large number of agricultural colleges throughout the Dominion.

Chemistry: The Department of Chemistry has to-day fifty-nine graduate students, divided among Physical, Organic, and Inorganic Chemistry. The liaison with the Paper and Pulp Research Laboratory is also effective. A fear may arise that the Dominion may be unable to absorb so large a number of highly qualified students. It must, however, be remembered that the efficiency of the Staff of the Department of Chemistry, McGill University, has captured a leading position in Canada, so that the Laboratory has become a Mecca to which the best students flock from various parts of the Dominion and elsewhere.

Economics: A country with such vast possibilities, too often misused, as Canada, must needs attract the enthusiastic attention of young economists. The theses of the graduate students of the Department of Economics deal mainly with Canadian problems. Many of these contain information not otherwise available, and, until the recent financial depression, many of the theses have been published. It is hoped that it will be possible shortly to renew the practice, and monetary aid will be welcomed.

Medicine and Surgery: It is increasingly evident that it is more desirable to prevent illness, disease, and accident than to remedy these misfortunes after they are incurred. Hence the essential steps to discover preventives and antidotes such as inoculation against smallpox, typhoid, diphtheria, rabies, venereal disease, and so forth. It is not sufficient to train general practitioners and specialists, but it is equally important to enlist the best brains in the profession to undertake prolonged scientific research to unravel the secret of those diseases not yet controllable, and to discover the means to arrest and to prevent the more insidious foes of men. The co-operation of the best doctors in all the hospitals with the most effective research workers in Physiology, Anatomy, Biochemistry, Pathology, Immunology, and Pharmacology is a sure road to progress. The chief obstacle is the high monetary rewards of the more successful physicians and surgeons and the comparatively low returns of the students and professors who concentrate on pure research.

Physics: It would be scarcely modest for the writer to dwell on this subject. The best testimony is from without. There are at present graduate students of this department holding a Rhodes Scholarship, a Moyse Scholarship, and no less than three "1851 Exhibition" Scholarships.

The Humanities: It will be noted at once that the National Research Council of Canada gives great encouragement to scientific students, but that the humanities receive, unfortunately, little or no support from any quarter. This is a profound misfortune! In a mechanical age we must remember the great Authority who said so emphatically that "Man does not live by Bread alone!" The recent gift for five years, of ten Fellowships by the Carnegie Foundation is a welcome and generous gesture. These will be administered by the Royal Society of Canada, and each year four will be given for the Humanities and six for Science.

French: There are conditions in the Province of Quebec and at McGill University, favourable to the study of French, conditions unique on this Continent. For several years French Summer Schools have been held at McGill, and these have been well attended, attractive, and beneficial to students. They have also been remunerative, so that the Principal once humorously remarked that the only departments that paid their way were French and Football!

Special privileges are given to the better students. Those who hold a Bachelor's degree, who attend four French Summer Schools, pass requisite examinations, and write a suitable thesis, may be awarded a Master's Degree, even if they have not been actually enrolled as McGill Students.

Emoluments: Time and space prevent a detailed account of every department. It is sufficient to state that the outlook of McGill is highly promising, particularly because so many young men of great ability and well-balanced enthusiasm have during the last few years been added to the Staff.

This article may well conclude with a summary of the emoluments held by graduate students during the current session.

FACULTY OF GRADUATE STUDIES AND RESEARCH
McGILL UNIVERSITY

Session, 1931–32

List of Fellowships, Studentships, Bursaries, and Scholarships held by members of the Graduate Faculty at McGill University, or elsewhere.

NAME OF STUDENT	SUBJECT	TITLE OF AWARD	WHERE STUDYING
Terroux, Mrs. F. L.	Zoology	Philip Carpenter Fellowship	McGill
Tarr, H. L.	Bacteriology	"1851" Exhibition Scholarship	Cambridge
Barsha, J.	Chemistry	Pulp & Paper Assoc. Scholarship	McGill
de Montigny, R.	Chemistry	Can. International Paper Scholarship	McGill
Frame, G. F.	Chemistry	Fellowship	McGill
Gray, K. R.	Chemistry	Bursary	McGill
Greig, M. E.	Chemistry	Studentship	McGill
Gurd, G. W.	Chemistry	Studentship	McGill
Hallonguist, E. G.	Chemistry	Studentship	McGill
Linton, E. P.	Chemistry	Fellowship	McGill
Macklin, L. S.	Chemistry	Bursary	McGill
MacLauchlan, D. W.	Chemistry	Bursary	McGill
Marshall, H. B.	Chemistry	Bursary	McGill
Mason, H. E.	Chemistry	Pulp & Paper Assoc. Scholarship	McGill
Massey, E. E.	Chemistry	Bursary	McGill
Munro, F. L.	Chemistry	Studentship	McGill
Perry, S. Z.	Chemistry	Studentship	McGill
Powell, E. C.	Chemistry	Sterry Hunt Res. Scholarship	McGill
Richardson, R. E.	Chemistry	*Scholarship	McGill
Ross, A. S.	Chemistry	Bursary	McGill
Sallans, H. R.	Chemistry	Studentship	McGill
Saunderson, H. H.	Chemistry	Studentship	McGill
Stewart, W. W.	Chemistry	Studentship	McGill
Sutherland, J. W.	Chemistry	*Scholarship	McGill
Trister, S. M.	Chemistry	Bursary	McGill
Williams, A. R.	Chemistry	Studentship	McGill
Winkler, Carl A.	Chemistry	Studentship	McGill
Atkinson, H. J.	Chemistry	Soils Fellowship, Que. Dept. Agric.	Macdonald College
Pimenoff, C. J.	Civil Eng.	John B. Porter Scholarship	McGill
Goodman, S. J.	Economics	Allen Oliver	McGill
Picard, Robert I. C.	Economics	I.O.D.E. Scholarship	London School of Economics
Reid, E. P.	Economics	Governors	McGill
Rollit, J. B.	Economics	Montreal Manufacturers	McGill
Rountree, G. M.	Economics	Special Grant	McGill
Stone, F. V.	Economics	Special Grant	McGill
Price, P.	Geology	Leroy Memorial Fellowship	McGill
Bray, A. C.	Geology	Scholarship	Yale
Grant, E. R.	Medicine	Studentship, Banting Foundation	Royal Victoria Hospital
Gottlieb, R.	Medicine	Fellowship, Banting Foundation	Royal Victoria Hospital
Estall, H. M.	Philosophy	Moyse Travelling Scholarship	Berlin & Freiburg
MacDonald, J. K. L.	Physics	"1851 Exhibition Scholarship"	Oslo, Norway
Lane, C. T.	Physics	"1851 Exhibition Scholarship"	Munchen, Germany
Langstroth, G. O.	Physics	"1851 Exhibition Scholarship," 2 yrs.	King's College, London

*Scholarships awarded by the Pulp and Paper Association. All other awards in Chemistry are from the National Research Council of Canada.

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McGill University Library

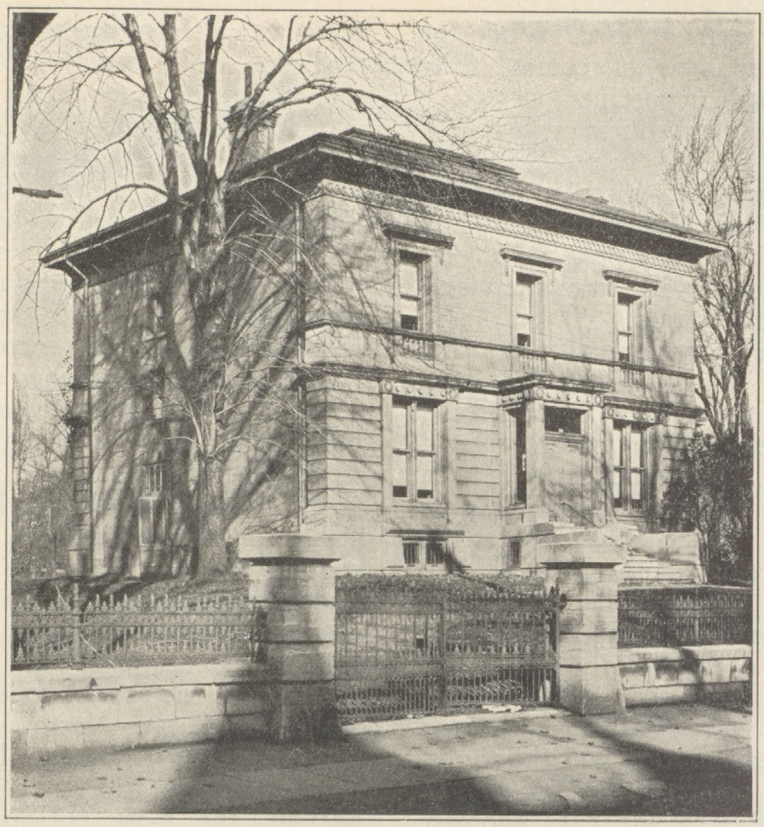
FACULTY OF GRADUATE STUDIES AND RESEARCH
McGILL UNIVERSITY

Session, 1931–32

List of Fellowships, Studentships, Bursaries, and Scholarships held by members of the Graduate Faculty at McGill University, or elsewhere. (*Continued*)

NAME OF STUDENT	SUBJECT	TITLE OF AWARD	WHERE STUDYING
Heard, J. F.	Physics	Nat. Research Council of Canada Studentship, 1 yr.	McGill
Ross, W. B.	Physics	Nat. Research Council of Canada Studentship	McGill
Thornton, R. L.	Physics	Nat. Research Council of Canada Bursary, 1 yr.	McGill
Snell, A. H.	Physics	Nat. Research Council of Canada Bursary, 1 yr.	McGill
Helwig, G. V.	Physics	Moyse Travelling Scholarship, 1 yr.	Manchester, Eng.
Alley, A.	Physiology	Banting Research Foundation	McGill
Baxter, S. G.	Physiology	Special Grant for Exp. Surgery	McGill
Rawlinson, H. E.	Physiology	Special Grant for Exp. Surgery	McGill
Stavrakis, G. V.	Physiology	Special Grant for Exp. Surgery	McGill
Spence, K. W.	Psychology	Studentship	McGill
Craig, Glenn H.	Sociology	Studentship	McGill
Davidson, Mary H.	Sociology	Research Assistant	McGill
Younge, Eva R.	Sociology	Studentship	McGill
Ramsden, Mary E.	Sociology	Research Assistant	McGill
Reynolds, L. G.	Sociology	Research Assistant	McGill
McMaster, N. B.	Soil Microbiology	Nat. Research Council Assistant	Macdonald College
Armour, J. C.	Exp. Surg.	Rockefeller Fellow.	McGill
Bowker, E. E.	Sociology	Sp. Research Assist.	McGill
Brodie, M.	Medicine Pediatrics	Cooper Fellowship Cowans & Christmas Fund	McGill
Buckland, F. E.	Mining Eng.	Sir Wm. Dawson Fellow.	McGill
Cameron, J. M.	Entomology	Macdonald College Alumni Grad. Schol.	Macdonald
Chorobski, G.	Neurosurg.	Ottman Memorial	McGill
Doubilet, H.	Exp. Surg.	Rockefeller Fellow.	McGill
Dworkin, S.	Physiology	Am. Otological Soc.	McGill
Ferguson, W.	Botany	Macdonald College Alumni Grad. Schol.	Macdonald
Gage, E. L.	Neurosurgery	Ottman Memorial	McGill
Harwood, R. U.	Exp. Surg.	Rockefeller Fellow.	McGill
Kearns, P. J.	Obstetrics	A. A. Browne Fellow. Clara Law Fellow.	McGill
Komarov, S. A.	Exp. Surg.	Rockefeller Fellow.	McGill
McRae, D. R.	Physics	1851 Ex. Schol.	Cambridge
Morton, N. W.	Psychology	Sp. Research Ass.	McGill
Norris, K. V.	Psychology	Sp. Research Ass.	McGill
Nowosad, F. S.	Agronomy	Dept. of Agr. Quebec Research Grant	Macdonald
Ross, Dudley	Exp. Surg.	Rockefeller Fellow.	McGill
Ross, D. A.	Physiology	Am. Otological Soc.	McGill
Stobart, W. T.	Mining Eng.	Dr. J. Douglas Res. Fell.	McGill
Sutherland, G. F.	Physiology	Am. Otological Soc.	McGill
Townsend, R. G.	Exp. Surg.	Rockefeller Fellow.	McGill
Webster, D. R.	Exp. Surg.	Rockefeller Fellow.	McGill
Webster, E. C.	Psychology	Sp. Research Ass.	McGill

TOTAL AMOUNTS: *Abroad*—$9,350.00 *McGill*—$59,410.00



THE McCORD NATIONAL MUSEUM

Housed in the old Joseph residence, presented to McGill by Sir William Macdonald, the Museum, founded by Dr. David Ross McCord, is fast becoming one of Canada's most noted sources of historical information.

The McCord National Museum, McGill University

By T. W. L. MacDERMOT, ARTS '17

MANY McGill men will remember that in 1909 a hotel company sought to buy that part of the grounds known as the Joseph property, on which to build an exclusive home for the transient great. The plan was blocked, as we now know, by the combination of Sir William Peterson's watchful eye and Sir William Macdonald's discriminating and generous purse, and McGill, as a result, is still happily free from anything which may be styled the "biggest in the world."

Instead—on that particular spot at the corner of Sherbrooke and McTavish Streets, the University now has the McCord National Museum, a monument to the munificence and collecting skill of David Ross McCord, a graduate of McGill in 1860. By the terms of Dr. McCord's will, his property and, in its way, the unique collection of Canadiana he had built up, became the property of McGill. The proceeds of the property will in due course contribute in part toward the maintenance and, within limits, the development of the Museum.

For some years before Dr. McCord's death, McGill had administered and financed the Museum, under a general committee, and, although perennially hampered by definitely limited funds, the work has since been carried

on with extraordinary zeal and care. While the University authorities have, of course, fully recognized the Museum's importance, in fact its irreplaceable value, in general educational work—of which something is said below—the real burden of the Museum was carried for years by one or two people, and the enthusiasm and generosity that has added many precious objects to the original collection, sprang from the vision and foresight of this small group.

It is impossible here to mention all the names of these pioneers of the McCord Museum. Many of them are on the General Committee—Mr. S. M. Baylis, Mr. R. W. Reford, Dr. I. Gammell, and others. Their work is to be seen in the records of the Museum and their gifts in many of its rooms. The Museum is first the fruit of the work of a single enthusiast—as such things nearly always are—but his enthusiasm stimulated co-operation of the utmost value.

The Museum was opened to the public ten years ago, when Dr. McCord and Miss M. Muir arranged the first exhibit. This was followed by further organization and the formation of a committee, composed of Dr. W. D. Lighthall, Mr. R. W. Reford, Mr. F. C. Morgan, and Dr. C. W. Colby. Later again, when Sir Arthur Currie succeeded the first Chairman, Dr. Francis McLennan, the Secretary of the Committee, Dr. G. R. Lomer, drew up a constitution and regulations to govern the work, and a full General Committee was appointed. Dr. Lomer's work was taken up by Dr. C. E. Fryer, Professor of Modern History in McGill University, in 1926.

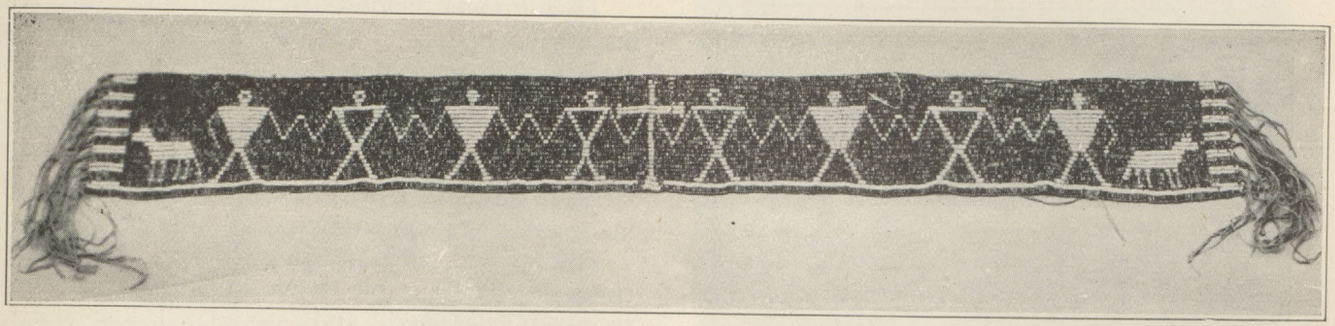
The record of those early years is interesting only when given in closer detail than is possible here, for without considerable outlay and with only a small staff it was necessary to develop slowly and carefully. For nine years Miss Muir was in charge of the collection, to which she devoted herself, while in constant touch with the work and personally most active in adding to the Museum and fostering its best interests was Dr. Lighthall. Amongst those who were invaluable in the early days of the Museum, Dr. Lighthall has a special place—as an old and close friend of the founder's, as Chairman of the General Committee, and as an ardent student and collector of Canadiana.

The McCord Museum contains a unique collection of Canadiana—of all periods and from many aspects. Rare books and pamphlets—in small numbers—manuscripts, autographed letters of nearly all the great men and women in our history, domestic objects, military arms, flags, pictures, maps, costumes of all sorts, carving, ecclesiastical furniture, metal work, and a great deal else, make deeply interesting material for the study and appreciation of three centuries and more of Canadian life.

Perhaps even more complete than this section, is the material drawn from the Indian history of Canada, which is very comprehensive and includes magnificent sub-collections, quite unsurpassed and impossible to duplicate. Such collections, for example, are the Indian costumes, acquired through the generosity of Miss Mabel Molson; the slate carvings of the Haida Indians on the Pacific, the artistic leaders of the Canadian Indian; the extensive set of cradle boards, carved and painted in the interesting character of the different tribes; the Indian blankets, now being specially catalogued and internationally known; the catlinite pipes; the Eskimo implements; the artifacts; the priceless wampum belts; and a large array of similar relics of Indian days gone by.

Amongst the special collections, such as those dealing with the North West Company, the Hudson's Bay Company, Franklin's and other Arctic voyages, the War of 1812, and James McGill, the most outstanding is the Wolfe collection. This may be fairly called the pearl of the Museum, both for its historical and picturesque value. Wolfe's pistols, Wolfe's diary, letters from the great general, and so on, make the collection a necessity in any comprehensive study of Wolfe and his campaigns. To these contemporary records of Wolfe, the Museum, through the beneficence of Dr. R. Tait McKenzie, has recently added a replica of McKenzie's statue of Wolfe at Greenwich, and a highly interesting sketch of the figure itself. These are accompanied by a number of photographs showing the minute care which the sculptor used to reach his composite representation of General Wolfe's figure and appearance.

These are only a few of the more important of the Museum's sections and possessions. Their mention is enough to indicate the high place the Museum may take in cultivating an interest in Canadian history among students of the University and the public at large. For the students, those who are directly concerned with history may use the Museum and its frequent special exhibits to supplement their reading as they can in no other way. It is a commonplace to say that Montreal is a historical city, set in a historical province. But, like many commonplaces, its significance is less frequently appreciated than one would think. Those who take an interest in their country's past and, what is more, realize how persistently the past bears on the present,



ONE OF THE MUSEUM'S FAMOUS WAMPUM BELTS

This belt, 5½ feet long and 27 rows of beads wide, commemorates the conversion of an Indian tribe to Christianity. The design, in white on a purple ground, shows the Cross, rising from a solid foundation, with white men leading red men in the path of righteousness. The Lamb of God appears at each end, in token of the life of peace the Indians undertook to adopt, consequent upon their acceptance of Christian principles.

will find any period they may wish to study at least partially represented in the McCord Museum. And every assistance will be given to such students.

The practical value of the Museum is becoming more evident as its contents are better known, and as the special groups of material grow more complete. It stands to reason that only the rare or fairly affluent student can journey for many miles to study a single document in the Museum —though such visits sometimes occur, for writers on certain aspects of Canadian history are now obliged to make use of McCord material. In one of the latest biographies of Wolfe, for example, that written by Professor W. T. Waugh, of McGill, and published under the title, "James Wolfe, Man and Soldier," the diary, letters, and other effects in the Wolfe collection of the McCord were indispensible. In the process of compiling the biography, certain of the Museum items were scrutinized to such good effect that a new view of their authenticity or significance was obtained.

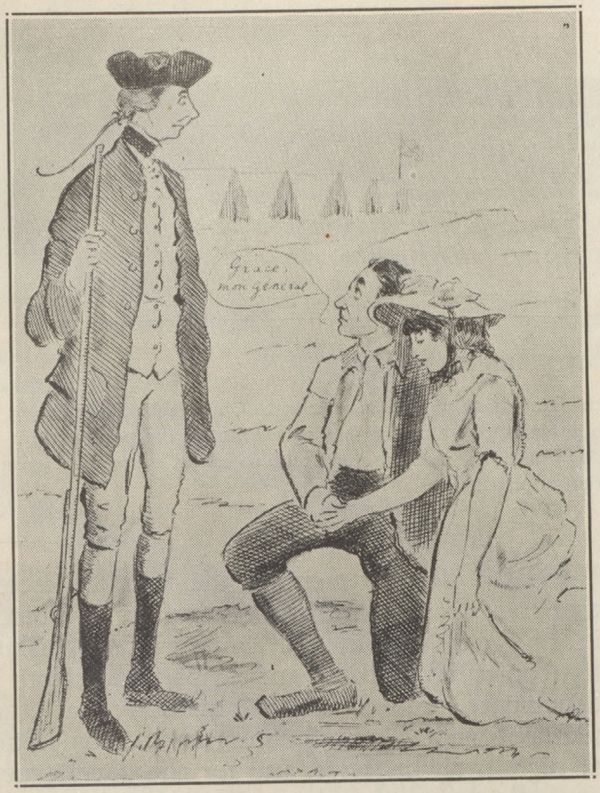
Again, in the preparation of historical papers for the Royal Society of Canada and other similar bodies, Mr. Justice E. Fabre Surveyer has depended in large part on the letters and papers of the period under study. A recent account of Adam Mabane is a case in point. Studies of the early Montreal merchants—the associates and rivals of fur magnates like James McGill, Simon McTavish, the Frobishers, etc.,—must involve considerable work on the portraits, relics, letters and maps dealing with that interesting band of business men. The recently acquired Minute Book of the famous Beaver Club is only one of the outstanding subjects available for study in this group of material.

Finally we may mention the frequent letters that come from students in other parts of Canada, in England, and in the United States, asking for copies of pictures and maps, transcripts of documents, and other information that they require for forthcoming books, for the completion of regimental histories, and for the development of collections elsewhere. It is unnecessary, perhaps, to say more to show how the strictly historical side of the Museum is expanding and will, no doubt, continue to expand. At some future date it may be possible for the Museum to issue a catalogue of the historical material available to and needed by research students. A list, for example, of its old Canadian newspapers would satisfy many of those who have suffered in the past from the huge gaps in this important source of historical material.

For those outside the University, the McCord is becoming an increasingly useful place to visit. School children are brought in groups and shown through the rooms. The experience, repeated over and over, can go far toward mitigating the notorious tedium of textbook history. It may even perform the miracle of lightening their darkness somewhat.

Finally there is the general public. During the past few years, great strides have been made through the vigorous efforts of the Museum authorities in letting the outside world know what the Museum contains, and explaining the significance of its possessions. Radio lectures have outlined the history, special notices have drawn attention to the exhibits, groups of objects arranged to illustrate aspects of the past have been put in special cases and widely advertised. Under the impetus of all this, the number of visitors has increased from a few hundreds—sometimes a few scores—a month, to thousands,

McGill University Library



GRÂCE, MON GÉNÉRAL

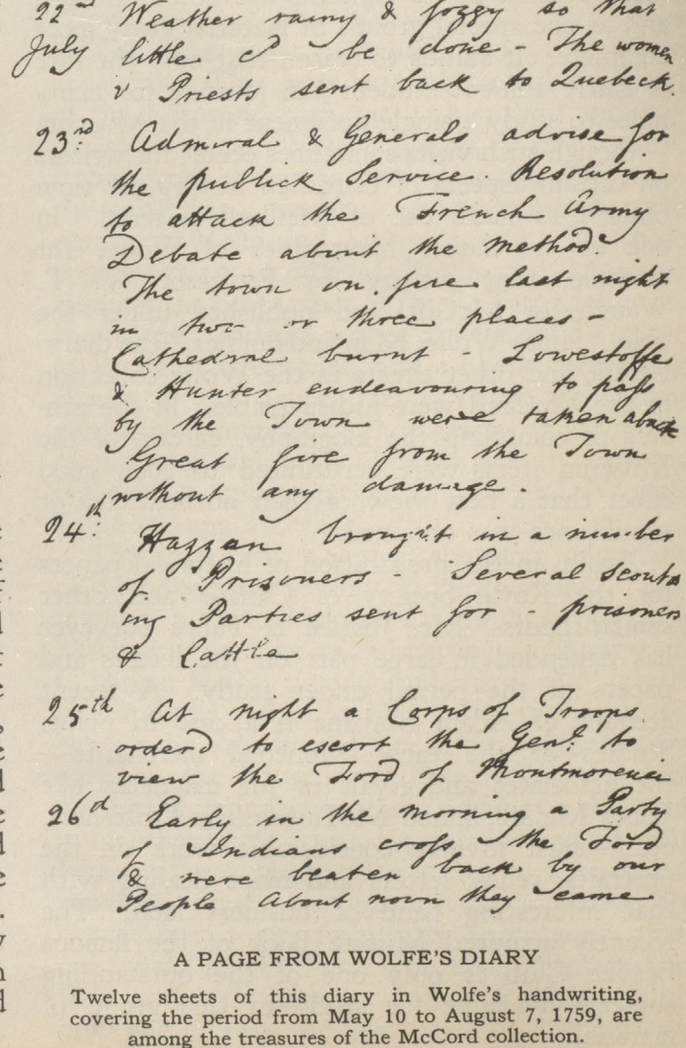
One of General Townshend's famous cartoons of Wolfe, now in the McCord Museum. Townshend's humour is a shade robust and the wording of Wolfe's reply has here been erased to permit uncriticized publication.

while various publishing and other business firms are applying in growing numbers for permission to make use of McCord material for illustration and decoration. All effort is made to present the historical material in the Museum with accuracy and appropriateness to its period, and, so far as is possible, the full correct description is attached to all objects in view.

It is satisfactory to record that with the development of this educational side of the Museum, the institution has acquired a host of new friends, and donations have been received from every quarter. The conviction grows that the Museum has a valuable work to do for the University, and the more complete the collections, the more valuable it will be. Visitors from the United States and elsewhere are often surprised at what they find in the McCord. Some have commented simultaneously on the peculiar and admirable quality of the collection, and on the wholly inadequate manner in which it is housed. One generous stranger from California actually offered to open a subscription fund with which to erect some day a building, fire-proof and spacious enough for the McCord treasures.

This project belongs to the future, but we may hope a not too distant future. The rooms are over-full now, and the storage is unsuitable. Much of the effectiveness of the Museum as a storehouse of educational material and as a repository of some relics of our Canadian forefathers, French and English, is lost through inadequate accommodation.

At the same time, pending the arrival of better times and a suitable home, material is being received, classified, and stored. It is worth remarking that most people are unaware of how well worth keeping many of their long-put-away belongings are. We continually hear of old letters, books, newspapers, and other relics of the past being thrown out, or destroyed as useless. History is a multifold fabric and in true history is woven a thousand minor details before the whole emerges. Owners of primary records of this kind, therefore, will serve Canadian history better by giving them to a Museum than by turning them to ashes.



July 22d Weather rainy & foggy so that little can be done - The women & Priests sent back to Quebeck.

23d Admiral & Generals advise for the publick Service. Resolution to attack the French Army Debate about the method. The town on fire last night in two or three places - Cathedral burnt - Lowestoffe & Hunter endeavouring to pass by the Town were taken aback Great fire from the Town without any damage.

24th Hazzan brought in a number of Prisoners - Several scouting Parties sent for - prisoners & Cattle

25th At night a Corps of Troops ordered to escort the Genl to view the Ford of Montmorenci

26d Early in the morning a Party of Indians cross the Ford & were beaten back by our People about noon they came

A PAGE FROM WOLFE'S DIARY

Twelve sheets of this diary in Wolfe's handwriting, covering the period from May 10 to August 7, 1759, are among the treasures of the McCord collection.



MISS RUTH DOW, B.A. '29

Who in January was awarded the first bursary offered by the recently-formed Scholarship Committee of the McGill Alumnæ Society.



ETHEL HURLBATT, M.A., LL.D. '30

This illustration is a reproduction of the portrait presented to the Royal Victoria College by the Alumnæ Association on the occasion of the opening of the New Wing last October.

Alumnæ Activities

IN an effort to expand the range of its activities to provide scope for the interests of all its members, and also to enlarge the field of its usefulness, the McGill Alumnæ Society last season instituted a system of committees and study groups, which is this year being continued with considerable success.

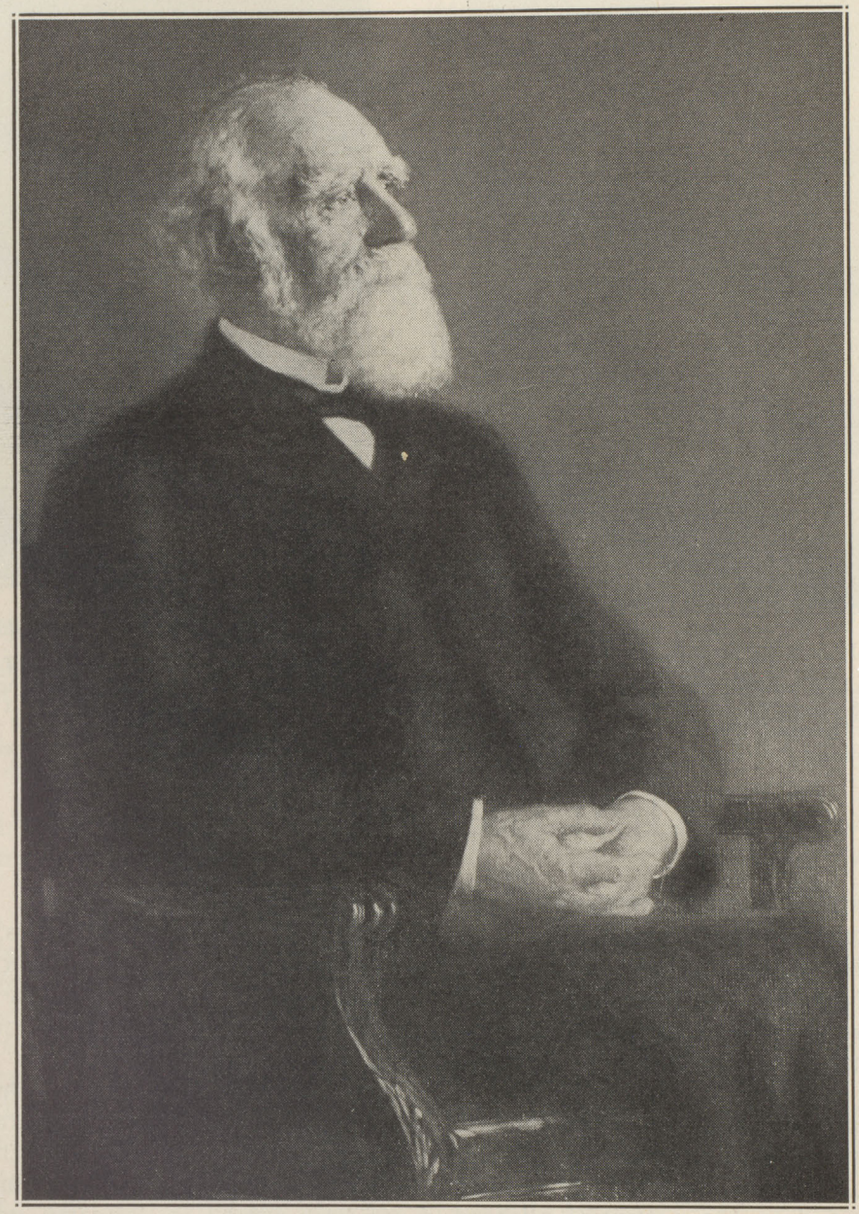
There are at present eight committees and three study groups in active existence. While these are designed to draw together the women particularly interested in the activities allotted to them, they are not disassociated from the interests of the Society as a whole. Several were formed with the express purpose of increasing the efficiency of the Society's work, and others, though inspired primarily by interest displayed by small groups of graduates, contribute much to the membership of the entire organization.

Committee on Endowments and Loans. An increasing interest in the welfare of the undergraduate body is an encouraging feature in the recent history of the Society. This is displayed in the formation of committees, of which the one of most far-reaching importance is probably the Scholarship Committee, whose object is to build up, by means of gifts and bequests, a three-fold fund to be used for bursaries and loans to students, and for some form of endowment.

Already it has won a reputation by its initial success and promptness of action. In existence only since the beginning of this Session, it made its first award in January, when a bursary of $150 was offered to Miss Ruth Dow, a medical student in her fourth year.

It would be hard to discover a more fitting candidate. Miss Dow's record in Arts shows that she never fell below first class in any subject in any year. In Medicine she has been uniformly successful. She has also shown herself to be a most public-spirited student, and her policy as President of the McGill Women Students'

(Continued on Page 60)



DONALD SMITH, FIRST BARON STRATHCONA AND MOUNT ROYAL

(From a painting by Wyatt Eaton in 1893)

The Life of Lord Strathcona

By W. B. HOWELL, MED. '96

IN the town of Lachine there is a solidly built stone house, which stands by itself, and is separated by a narrow strip of water from the main road between Montreal and Ste. Anne-de-Bellevue. The strip of water is the old Lachine Canal and the house, now divided into tenements and occupied by poor families, is the only remaining member of a group of buildings which was at one time known as "Lachine House" and was the headquarters of the Hudson's Bay Company. This was the point from which the "gentlemen adventurers," with their Indians, used to start on their journeys to the West of Canada.

One summer day in the year 1838, a sandy-haired Scotch lad, whose name was Donald Smith, appeared at Lachine House in search of employment. He was kept waiting some considerable time before he was admitted into the Governor's presence. Young immigrants applying for positions in the "great company" were very small fry indeed. In due course he was ushered into the awful presence of the arbiter of his fate, a little man whose only harmless weakness seems to have been to model his manner upon that of Napoleon. This was the astute, cold-hearted George Simpson, Governor of the Hudson's Bay Company. He was nicknamed the "King of the Fur Trade," and was tyrant over a territory which equalled in extent the whole of Europe. Simpson, distracted for the moment from matters of importance, glanced up at the clean-built youngster, and, being an unerring judge of men, decided that he could find a place for him. Smith emerged from the great man's presence, with the justifiable elation of one newly appointed an apprentice-clerk in the Hudson's Bay Company's service with a salary of £20 a year. When he was a very old man, very rich and very famous, he said to a friend, referring to this appointment,—"I didn't believe that any man could be worth so much money." He was set forthwith to count musk-rat skins, an occupation which, since no one took enough interest in him to tell him to wear gloves, made his hands very sore. He spent two years learning the rudiments of fur trading in the neighbourhood of the Island of Montreal; part of this time he was at a post on the Lake of Two Mountains.

One winter's day, he was summoned to the Governor's office and told that he was appointed to Tadousac. He left Montreal by the "stage" and reached Quebec in two days. As there was no stage below Quebec, he had to hire a sleigh there and a man to drive him. His luggage consisted of a small hair trunk and a bag of provisions. It took him two days of driving and snow-shoeing to reach Tadousac. During the next seven years, he was moved from post to post, each remove taking him further east along the north shore of the Gulf of St. Lawrence. He was for a while at Seven Islands, one of the most God-forsaken places in the world. His next move was to Mingan, ninety miles further along the coast. While there his house was burnt down. He came home one night to find it reduced to a glowing mass of embers. His private property had been saved, but not that of the Company. Without hesitating, he threw his own possessions one after the other into the fire. "They might as well go," he said, "where the Company's property has gone." It was the lordly gesture of a boy who would be true to his salt.

During his term at Mingan, he committed the sin, grievous indeed in the Company's eyes, of leaving his post without permission. He was afflicted with snow-blindness, and believing that he was going blind, went by schooner to Montreal. This was in November, 1847. He reported his presence to Sir George Simpson, who, after first receiving assurance from a doctor that the disease was quite curable, sternly told Smith to leave at once for the North-West River post in Labrador, a distance of 1200 miles. The journey was made in mid-winter. From Tadousac he went on snow-shoes, accompanied most of the

way by two incompetent Indian guides. The party was lost repeatedly in snow storms; hunger, exhaustion, and frost-bite were endured; Smith had both feet frozen; his snow-blindness returned; but he pushed steadily on. One of the guides died of exposure, and the body was wrapped in a blanket and left in a tree. Six days later, Smith and the remaining guide staggered into Mingan in a pitiable condition. When he had recovered, he went on to Mushquario, where he found that no further progress was possible until the spring thaw had made the rivers navigable for canoes. He reached North-West River at the end of April.

The North-West River, at the mouth of which the Hudson's Bay Company's post was situated, pours its waters into Hamilton Inlet, an arm of the sea situated about two hundred miles north of Belle Isle Straits. In this remote spot, where winter lasts for eight months and summer is made horrible by myriads of mosquitoes, black flies, and house flies, Smith settled down and lived for twenty years. Most of the year's work was crowded into the short summer, when the Indians brought in their furs and the fishing industry burst into a short-lived but feverish activity. There were times in those short summers when he worked all night as well as all day. The future President of the Bank of Montreal, the man who developed into one of the greatest financiers of his age, does not seem to have been particularly clever at that elementary part of his duties, which consisted in book-keeping. The system he followed may have been clear to himself; it was not clear to others, for we find the margins of some of his ledgers decorated by his successors with comments such as "Damn Donald Smith"; and "Hang Donald." In the winter, there were long expeditions with dog-teams to other posts, when he tramped beside his *komatik* all day and at night slept by a camp-fire in the forest, or shared the floor of a filthy hut with a family of Indians or Esquimaux.

There were, during those winters, long evenings when he had no work to do for the Company, but they were never wasted. He read every book that he could lay hands upon. To learn about the country in which he lived, he devoured books on zoology, geology, and botany. He studied the Esquimaux and the Indians, and learned to understand and manage them. He subscribed to "The Times." His copies were delivered to him once a year when the Company's ship made its annual visit. As he sat down to breakfast, he unfolded his morning paper; a year late to the day. In the long winter evenings, he wrote himself long letters on all sorts of subjects—political, historical, literary—and then answered them. In this way he trained his mind and acquired an excellent literary style. It was while there he married Isabella, the daughter of Richard Hardisty, Esq., a Chief Trader of the Company.

In the course of time he was promoted to the rank of Chief Trader. Promotion brought higher pay, but it also entailed more work and more responsibility. Knowing the conditions in the Company's outposts and the need for better food for the officers and servants, he set himself to show them that they could make life easier for themselves. Although such a thing had never been attempted before, he believed that it would be possible to have a farm in Labrador. Old-timers laughed at his ideas. They laughed still more when they saw him beginning to work at his farm. The laugh echoed as far away as Montreal; and re-echoed in lonely shacks on the shores of James Bay and Hudson Strait. By-and-bye, the scoffers found out that the "Scotchman Smith" had a farm at Esquimaux Bay, with horses, cattle, sheep, chickens, all sorts of vegetables —and a flower-garden! After that, people who knew about Smith began to ask for further particulars when he did anything that seemed foolish.

It was the custom of the Hudson's Bay Company at the time to give the wintering partners, after twenty or twenty-five years of service, leave of absence, long enough to enable them to visit England. The Company had always been generous to its employees. Even so long before as 1744, it offered to pay £30.0.0 to the widow of any of its officers who was killed defending its property against enemies! Smith took advantage of its generosity in 1864 and visited Scotland and England. In London he met the Directors of the Company, who were greatly impressed by his personality, his knowledge of Labrador, and of the affairs of the Company. On the evening before he left England to return to Labrador, he was invited to the dinner of the Directors, which was, according to an ancient custom, held on the evening before the Company's ship sailed. He was notified beforehand that he would be expected to answer to the toast of "the commissioned

officers," and prepared a speech for the occasion. When he was called upon, it was found that he had bolted. This was, probably, the only occasion when his stout heart failed him.

In 1868, he received orders to come to Montreal and act as manager of the Montreal district — which included the Province of Quebec and Labrador. He returned to Lachine House, where thirty years before he had received his first appointment in the Company. Reading had made him a full man; writing had made him an exact man; thirty years of adventure, responsibility and solitude had made him a thoughtful man. He was middle-aged; he had attained the rank of Chief Factor; and had saved ten thousand pounds, enough to keep him, his wife and his daughter comfortably for the rest of their lives, if he wished to stop working. But the fates decreed otherwise. He was now to begin his career.

At this time the Dominion of Canada extended only as far west as the western boundary of Ontario. Beyond Canada was a vast wilderness which belonged to England and was administered by the Hudson's Bay Company. The "gentlemen adventurers" were lords and proprietors of a country seven times the size of the Canada of those days. In 1868, there was a strong feeling among Canadians that steps should be taken to include Rupert's Land in the Dominion. Every member of the Government at Ottawa, with two exceptions, was either indifferent or hostile to the plan of adding so vast a territory to the young Dominion. The prospect of a ministerial crisis, however, produced a change of heart, and in 1869, the annexation was carried into effect by agreement with England. The Hudson's Bay Company surrendered its right in consideration of the sum of £300,000 and the right to retain a certain proportion of the land. The Canadian Government undertook to respect the rights of the Indians and the half-breeds. The bargain closed, the gentlemen at Ottawa despatched the Hon. William Macdougall to govern the new territory, and were once more free to apply their minds to more important matters than building up a Canada which would extend from the Atlantic to the Pacific. They were ignorant of a storm which was gathering at the south-east corner of the new territory, in the Red River district where Fort Garry stood. The population there, amounting to some thirteen thousand people, was composed of widely-different elements, the majority being the French half-breeds, who, though they had certain grievances against the Hudson's Bay Company, viewed with intense alarm the change from the Company's rule to that of Canada. The Canadian Government was responsible for this discontent, for, with almost incredible tactlessness, they had neglected to consult the inhabitants before taking over their country; nor had they made any attempt to explain to the excitable, ignorant half-breeds that they would not be dispossessed of their land.

Even before the conclusion of the negotiations which transferred the ownership of Rupert's Land to Canada, the Canadian Government sent surveyors to mark out the district into townships. Swarms of settlers began to pour into the country from England, Canada, and the United States, and to stake out claims for themselves. The dismay of the half-breeds when they saw their heritage threatened in this way was shared by the old settlers and the employees of the Hudson's Bay Company.

The half-breeds were divided amongst themselves. Some of them, descended on their father's side from French ancestors, were Roman Catholics; others came of Scotch Presbyterian stock. The heterogeneous mixture of old residents and newcomers formed itself into several political parties. There was a Canadian party, under the leadership of a turbulent giant named Schultz. Another party, composed largely of Fenians, wished to see the Red River district formed into a republic. A third party, the American, was in favour of annexation with the United States, and was financed by sympathizers in that country. One of the leaders of the American party was the firebrand, "Colonel" Enos Stutsman, whose truculent disposition a beneficent Providence had partly neutralized by sending him into the world without arms or legs. The prejudices and passions of the community were kept at fever heat by the ceaseless activities of carpet-baggers. The village of Pembina, at the border, was crowded with Fenians and filibusters ready on the outbreak of fighting to pour into Canada. It was the focus from which much energy was directed to stirring up the passions of the Red River people. The postmaster there, a friend of Riel, strongly in favour of the annexationists, was tampering with the mails, all of which had to pass through his hands. Riel, clever and ambitious, but ill-balanced,

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was at the head of an armed band of ignorant and excitable half-breeds. Should fighting occur, there would be little doubt but that the Indians of the plains would be found on their side. Meanwhile, the government of the country was still the business of the Hudson's Bay Company, and would remain so until Canada had paid the Company the purchase price of £300,000 and had formally taken possession. But the Company's rule, unsupported by any police or military force, had been recently proved, beyond any possibility of doubt, to be a farce. Should rebellion break out, neither the British nor the Canadian Government could do anything, as it was impossible to send troops into the country in winter. In summer they would have to cross 500 miles of trackless forest. Such was the state of affairs when the newly-appointed Lieutenant-Governor, the Hon. William Macdougall, travelling through American territory, arrived at Pembina, and found his way barred by an armed band of half-breeds, from whom he learned that Riel and his followers had seized Fort Garry and set up a provisional government. This was as far as Macdougall ever got in the direction of the territory he was to govern.

When the news of what was going on reached Sir John Macdonald, he sent for Donald Smith as the highest accessible official of the Hudson's Bay Company, and after consulting with him, appointed him Canadian Commissioner to Red River. His mission was "to enquire into and report upon the causes and extent of the armed obstructions offered at the Red River, in the Northwest Territories, to the peaceful ingress of the Hon. W. Macdougall . . . upon the causes of the discontent and dissatisfaction at the proposed change . . . to explain to the inhabitants the principles on which the Government of Canada intends to govern the country, and to remove any misapprehensions that may exist on the subject."

On December 13th, Donald Smith, with his brother-in-law, Mr. Richard Hardisty and Dr.—afterwards Sir Charles—Tupper, left Ottawa for Fort Garry by the quickest route, which was through Toronto, Chicago, and St. Paul, and across the State of Minnesota. At this time, there was no railway in that part of Ontario which lies north of Lake Huron and Lake Superior. From St. Paul they travelled north to Breckenridge, where the railway ended. The rest of the journey was performed in Red River carts, the party sleeping out every night in the open air. At last, on December 27th, Donald Smith and Hardisty walked coolly into Fort Garry and installed themselves there, placing themselves in the power of Riel on the very day he had assumed the title of President of the Provisional Government. An interview took place immediately, at which Riel, backed by a dozen of his chief supporters, tried to make Smith recognize the Provisional Government. Smith emphatically refused. This was the first of many meetings at which the fiery, excitable half-breed tried, with unvarying lack of success, to impose his will on the courteous but inflexible Smith. There were, at this time, some fifty British subjects imprisoned in Fort Garry by Riel's orders. One of the prisoners, in revenge for the cruel treatment he received at this time, had the satisfaction of acting as hangman when Riel was executed 16 years later. Smith was held a prisoner there from the time of his arrival to the end of the following February. On one occasion, the exasperated rebel leader said to some of his followers—"Shoot that Scotchman Smith if he attempts to escape." Smith, however, was allowed to receive visitors and many influential people called to see him. To them he explained the intentions of the Canadian Government. In this way, and by the help of his brother-in-law, upon whose movements Riel imposed no restraint, he succeeded in undermining the influence of the rebel, and promoting the formation of a loyal party among the French-speaking part of the population.

On January 19th, a mass meeting took place in Fort Garry. It was held in the open air because there was no hall large enough to accommodate so many people. The temperature was twenty degrees below zero, and a strong wind was blowing when Donald Smith, Riel, Col. de Salaberry, and the Fenian, O'Donahue climbed up on a platform erected on two Red River carts. Overhead fluttered the Provisional Government's flag with its fleur-de-lys and shamrock. In spite of many interruptions and threats, Smith read his commission from the Canadian Government. Forty delegates were elected to act as a committee to examine his commission. On the 27th, Smith appeared before the committee, explained the intentions of the Canadian Government, and officially invited them to send delegates to Ottawa to explain the views and wishes of the inhabitants of the Red River district.



C.P.R. Photo

WINNIPEG IN 1870

Old timers in the West often recall Winnipeg's famous mud. This photograph would suggest that their accounts are in no way exaggerated.

Riel's conduct throughout these times was violent and ill-balanced; at one time he would protest his desire for an amicable arrangement with Canada, and at another threaten death to those who opposed him. He forced his way to the bedside of Governor MacTavish, of the Hudson's Bay Company, when he was recovering from a dangerous illness, and threatened to have him shot before midnight. Dr. Cowan, another officer of the Hudson's Bay Company, and Captain Boulton were arrested and told that they were to be summarily executed. Only with the greatest difficulty was Riel dissuaded from carrying these threats into effect.

Finally, Riel ordered the trial by court-martial of a young Canadian named Scott, who had been unruly in prison and insulting to his gaolers and to Riel himself. A verdict of guilty was found and Scott was condemned to death. When Donald Smith interceded on Scott's behalf, Riel's argument was—"We must make Canada respect us." On March 4th, 1870, Scott was executed under circumstances of great brutality. Riel had no reason to be gratified by the effect on Canadian opinion of this brutal murder of Scott. There was fierce indignation, and the preparations for the despatch of a military expedition under Col. Garnet Wolseley were hurried on with feverish intensity.

After Scott's death, Smith, realizing that any further stay would serve no useful purpose, left Fort Garry to return home. His mission had been a delicate one. Through his influence and that of Bishop Taché, who had returned to Manitoba a few days after the murder of Scott, there was no outbreak of fighting. The settlement remained quiet until the arrival of Wolseley's force.

For the ability, discretion, and firmness with which Smith had carried out a very difficult mission, he later received the thanks of the Canadian Government.

Shortly after leaving Fort Garry, he met on the prairies a young man travelling north by dog-team. This was James Jerome Hill, who was to have a momentous influence on his life.

Donald Smith had gone to Fort Garry a comparatively unknown man. When he returned to Montreal, his name was in everyone's mouth; the importance of his mission had been realized. His official report was read with intense interest in Canada and Great Britain. So well-written was it that Disraeli, then Prime Minister of England, kept a copy of it on his desk, and used to show

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it to visitors as an example of how such documents should be drawn up. In this report, Smith urged upon the Canadian Government the importance of raising a strong military force to maintain order in the Northwest Territory. The recommendation was later acted on, and the result was the organization of the Royal Northwest Mounted Police.

Smith went out again to the Red River district in the following summer. He was at Fort Alexander when Colonel Wolseley's expeditionary force arrived, after forcing its way through the forest from Thunder Bay in Lake Superior. He entered Fort Garry by Wolseley's side just as Riel, Lepine, and O'Donahue, on the other side of the Assiniboine River, mounted their horses and galloped off to escape capture.

The act which instituted the new Province of Manitoba was passed in 1870. Sir John Macdonald had sounded Smith beforehand on the question of accepting the appointment of Lieutenant-Governor. A smaller man, influenced by vanity, would have consented; but Smith had other ambitions. Hardly two years had elapsed since he had emerged from the isolation of Labrador. Now, having had opportunities to match his powers with those of other men, he was full of justifiable self-confidence. He saw Canada an unimportant, struggling dependency of England; he knew of the vast fertile lands in the West, capable of supporting millions, but separated from the East by hundreds of miles of trackless forest; he knew that railways were creeping out over the West of the United States and filling the land with settlers; and he foresaw that Canada must soon shoulder a similar burden. The West must be filled with men and women of British race, and fixed to the East with a skewer of steel in the form of a railway. There was as much sound reasoning as imagination, in his dreams of a great future for the land of his adoption. Now was the time for that great future to begin to unfold. It would be strange if he did not play a big part in it.

Early in 1871, elections were held at which Smith was returned as member for Winnipeg in the Provincial Legislature and for Selkirk in the Dominion House. Much interest was taken in the new Conservative member on his arrival in Ottawa. He was the first of the members of the new Province to arrive. At a banquet given at the Russell House a few days after his arrival, he made a speech in which he spoke earnestly of the importance of building railways to connect East and West, and prophesied that within ten years such a railway would be built. This was, as he well knew, the only way in which the new Northwest Territory could be kept part of Canada. British Columbia had entered Confederation the year before on condition that within ten years it should be connected with the East by a railway. The population of Canada at this time was four millions and the estimated cost of a transcontinental railway was one hundred million dollars. It was not to be wondered at that a large proportion of the people of Canada did not believe that so great an undertaking could be carried out.

That summer found Smith in London, acting as representative of the wintering partners of the Hudson's Bay Company. It must be remembered that the relations between the officers of the Hudson's Bay Company and the Company itself were not the relations which exist ordinarily between employer and employee.

In 1821, at the time of the amalgamation of the Hudson's Bay Company with the Northwestern Company, an agreement, known as the "Deed Poll," was made, by which two-fifths of the net annual profits of the Company were divided among the wintering partners. Chief factors and chief traders received a fair wage during their period of service and a sum of money upon retiring, which, added to what they had saved, was enough to live comfortably upon when they left the Company. Saving was easy to men living their life of isolation from the world. In 1868, there was a change of management. The International Finance Association bought the shares, property, and rights of the Hudson's Bay Company. No attempt was made during the negotiations to consult the wintering partners. A rumour of the proposed transfer, however, reached them, and they addressed a memorial on the subject of their claims, to the Governor and Board of Directors. They received in reply the reassuring news that no sale was likely to take place, but that if it did, their interests would be guarded. A little later, they read in the newspapers that the sale was an accomplished fact. It required a hint from the wintering partners that they might secede and form a company of their own to convince the new Board of Directors that it would be wise to keep the "Deed Poll" in operation; and it remained so until 1870.

When Canada annexed Rupert's Land, the wintering partners took no little interest in the £300,000 paid to the Hudson's Bay Company. The men who had borne the heat and burden of the day remembered their treatment in 1863. As they had anticipated, the shareholders claimed the whole amount for themselves. They, therefore, delegated Donald Smith to go to London and present their claims. Stormy meetings took place. The shareholders raged. The Directors laughed—at first. Donald Smith smiled, courteously insistent. When he left for home, the Company had voted £107,055 to satisfy the claims he had been pressing. When Smith had made up his mind about anything, it took something more than ordinary human flesh and bone to prevent him getting what he wanted.

He was now in charge of the fur-trading interests of the Company, but the steady influx of settlers into Rupert's Land was beginning to make the profits of dealing in fur small, compared with those to be obtained by the sale of land. In 1874, he gave up his position as Chief Commissioner of the fur trade, much to the regret of the men who had worked under him, and became the Company's Land Commissioner. It was during this period that he built the home outside of Winnipeg, which was known as "Silver Heights." He did not lose interest in the men who had worked under him, and for years exerted his influence on their behalf with the Directors in London. In 1879 he resigned the position of Land Commissioner, owing to the pressure of other business. By 1883 the former apprentice-clerk, who had served the Company for £20.0.0 a year, was one of the principal shareholders, and was in a position to insist, at the annual meeting, on certain changes in the directorate. Among the changes was the inclusion of his own name in the list.

The general election of 1872, the first since Confederation, was fought out with great bitterness all over the Dominion, but nowhere with greater bitterness than in Winnipeg. Donald Smith, however, was re-elected member for the county of Selkirk. Polling booths were burned down on election day, and in the evening troops had to be called out to quiet the disturbance. Upon one occasion during the campaign, Donald Smith came out of Fort Garry in a democrat waggon which was turned round, so that standing up with his back to the horses and holding on to the seat, he could address the crowd. He was pelted with lumps of Red River clay, and as he dodged them, he went on addressing the mob until the driver could stand the strain no longer and drove off.

Next year, Sir John Macdonald's star was at its zenith. He had brought Confederation into being. He had proved himself great, not only as a political strategist, but as a statesman. But on March 5th, a member rose in the House of Commons and accused him of accepting large sums of money for election purposes from certain individuals who, in return, were to be given the contract to build and operate a transcontinental railway. A political crisis of the most serious kind was precipitated, and Macdonald had to summon his supporters to his aid. Smith was at Fort Carlton in the Northwest Territory, where he received a letter from the Prime Minister saying: "Upon you and the influence you can bring to bear, may depend the fate of the administration." Smith left at once for Winnipeg, a distance of six hundred miles; the first stage on his journey to Ottawa. Tied into his seat so that he could not fall out of the conveyance when sleep overtook him, he drove day and night, without stopping except for food. Immediately upon his arrival at Ottawa, Sir John sent for him and thanked him for his speedy return. Donald Smith explained that his own attitude in Parliament would be determined by the statement in the House which the Prime Minister would make. If the statement were satisfactory, no one would vote more gladly for the Government than he would, but public interests must prevail over private ones. Seven days were spent in stormy debates in the House of Commons. Strong influence was brought to bear on Donald Smith in private; no one knew how he would vote; no one knew better than he how to keep his own counsel, though he was the best listener in the world. When, on the seventh day, he rose to speak, he faced an audience breathless with expectation. At first he dealt in terms of the highest eulogy with the achievement of the Prime Minister and the party in power. And then came a "but", which changed the expressions on the faces of the Government supporters from exultation to dismay, while the members of the Opposition thrilled with hope. Sir John Macdonald "was incapable of taking money for corrupt purposes." Smith would be most willing to vote confidence in the Government —could he do so conscientiously. It was with

very great regret that he felt he could not do so. For the honour of the country, no Government should exist that has a shadow of suspicion of this kind resting on them, and for that reason he could not support them. Only five years before, Donald Smith had come out of the wilds of Labrador an unknown man. Now his opinion carried so much weight that the Prime Minister, hearing it, decided that there was nothing left for him but to resign.

At the general election which followed, the Conservative Party met with overwhelming defeat. The Liberals came into power, with Sir Alexander Mackenzie as Prime Minister. Mackenzie made no secret of his opinion that the promise made to British Columbia at the time of Confederation, to connect that Province with Eastern Canada by a railway, to be completed in ten years, could not be kept. After failing to get the work done by private enterprise, he reluctantly decided that the Government must undertake the task. By 1878, when Macdonald and the Conservative Party came into power again, the work was going on languidly in the neighbourhood of Fort William and of Selkirk.

Then in 1880, Sir John Macdonald announced that a group of men had come forward with an offer to build and operate a transcontinental railway. The syndicate was composed of George Stephen and Duncan MacIntyre, of Montreal; John S. Kennedy, a New York banker; Messrs. Morton Rose and Company, of London; Messrs. Kohn, Reimach and Company, of Paris; and R. B. Angus and J. J. Hill, of St. Paul. Though his interest in the venture was as great as that of any other member of the Syndicate, Smith's name was left out; for it was known that the Prime Minister had not forgiven him for his failure to vote for the Government at the time of the Pacific scandal of 1871. To explain how this group of men came to make the offer, it is necessary to tell of their connection with the St. Paul and Minneapolis and Manitoba Railway.

Smith's first visit to Fort Garry in 1870 had been followed in the succeeding years by many journeys to and fro. Each time he passed through St. Paul, he travelled to Breckenridge, his point of embarkation on the Red River, by the St. Paul and Pacific Railway. The normal state of this railway was one of financial difficulties, with occasional lapses into bankruptcy. It had commenced its career as the Minnesota and Pacific Railway, and after the Civil War had changed its name to the St. Paul and Pacific. But the change of name brought no improvement in its habits; the system of management by incompetency and dishonesty continued. The right of way was littered with ties which were too far advanced in the process of decay ever to be used, and with rusty odds and ends of bridges. There were fifteen different patterns of rails, all of them made of iron instead of steel. An occasional train moved tremblingly along what was derisively called "two streaks of rust and a right of way." There were places where it was not safe for anything heavier than a hand-car to move. The amount of traffic in 1873 may be judged by the receipts, which were in June, $353.95, and in July, $300.83. The bondholders lived thousands of miles away, in Holland. The railway was, in fact, a standing joke in the country.

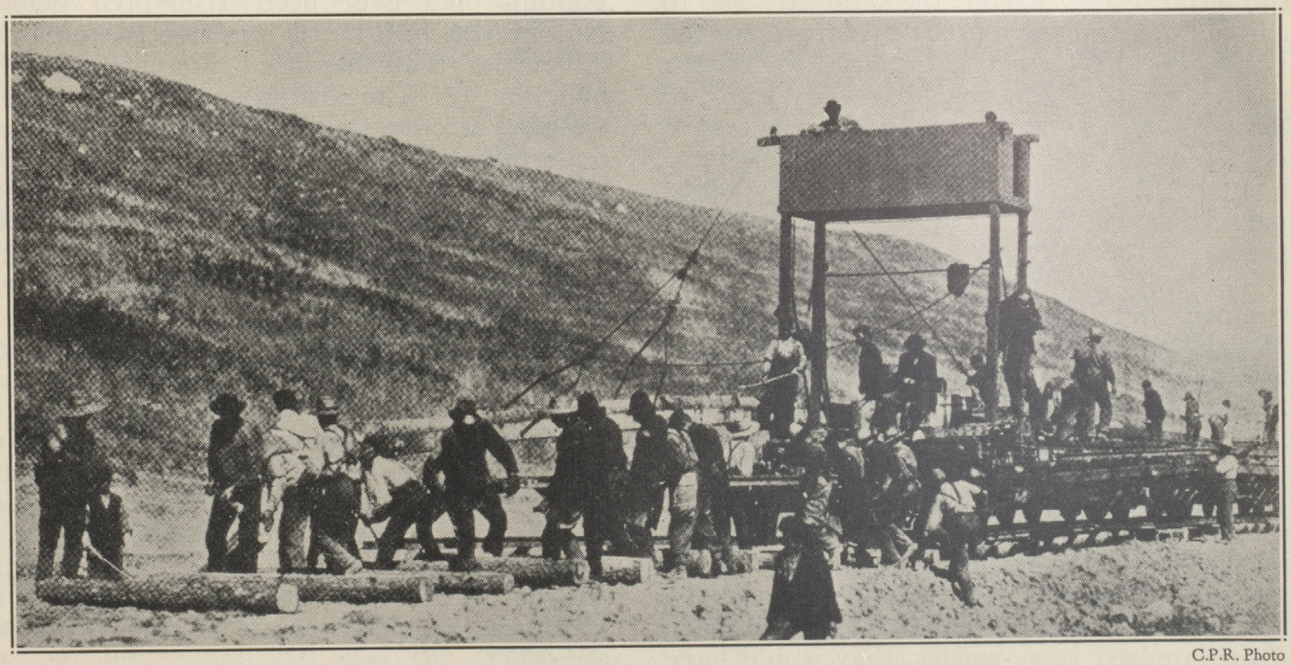
There were two men living in Minnesota who looked at the railway but overlooked the joke. They were both Canadians. Their thoughts by day and their dreams by night were focussed on this absurd little railway. These two men were James Jerome Hill and Norman Kittson. Hill had been born in a log cabin in the backwoods of Ontario. While still a lad, he found himself one day penniless in the streets of St. Paul, then a busy little town of five thousand inhabitants. Endowed with brains, health, courage, and plenty of energy, he had become by the age of thirty a man of some consequence. The business which occupied most of his attention was the buying and forwarding of supplies for the residents of the Red River district in Manitoba. For some years he had a keen competitor in Norman Kittson, who acted as the Hudson's Bay Company's agent in St. Paul. About 1873, the two men became partners and called their business "The Red River Transportation Company." The goods they forwarded were loaded upon carts at St. Paul and taken to some convenient point on the Red River, where they were transferred to flat-bottomed boats, which were towed down stream by small steamers.

The Red River, as it flows north, forms the boundary between the northern parts of Minnesota and North Dakota. This territory, the soil of which is of the most fertile description, was at that time quite uninhabited. A steadily increasing flow of emigration passed from St. Paul to the Red River and down the Red River to Manitoba. Hill and

Kittson looked thoughtfully at the feeble little railway with the grandiose name. It did not pay. It never had paid. They pored over the charter and found it of absorbing interest. Grants of land were mentioned—grants of millions of acres which would become the property of the railway company if the railroad were built within a certain length of time. The building had not been done, but there was still time. Once built, the railway would carry the traffic between St. Paul and Manitoba; it would be the means of covering the uninhabited prairie with settlers. They pictured to themselves new villages springing up, new towns, and even in years to come, perhaps, new cities. But how to find the capital?

Donald Smith, whenever he passed through St. Paul, found time to visit Hill and Kittson. Into his sympathetic ears, they poured their tale. He was too shrewd not to see that their scheme was sound; he became infected with their enthusiasm. He foresaw that an era of railway building must soon commence in Canada. As a Member of Parliament, he could urge the importance to Manitoba of a railway which would connect with the St. Paul and Minneapolis at Pembina. Goods and passengers could then be carried directly from St. Paul to Winnipeg. But, like the other two, he did not know where to get the capital.

At this time, George Stephen, Donald Smith's cousin, was President of the Bank of Montreal. The two men saw a good deal of one another during Smith's visits to Montreal, and Stephen heard much about Hill and his plan to buy a bankrupt railway. In 1876, a lawsuit, in which the Bank of Montreal was concerned, brought Stephen and the General Manager, R. B. Angus, to Chicago. An adjournment gave them a week with nothing to do. They tossed a coin to decide whether they would go to see "the railway which Smith was always talking about," or go to St. Louis. Never did the toss of a coin have more momentous consequences. The two men went to St. Paul, talked to Hill and Kittson, examined the line, and decided that the scheme was feasible. Stephen went to Amsterdam and interviewed the representatives of the Dutch bondholders. He suggested that they should put more money into the railway. He assured them that if the company were reorganized and the railroad extended, great fortunes could be made. He was scoffed at. The bondholders were in no mood to throw more money away. They offered him the bonds at a nominal price, and he accepted their offer. On his return, a syndicate was formed which included Stephen,



C.P.R. Photo

THREE MILES A DAY!

At this speed, unprecedented at the time, the line of the C.P.R. was driven across the Prairies. The photograph shows a track-laying gang at work in the summer of 1883.

Donald Smith, R. B. Angus, N. W. Kittson, J. J. Hill, and John B. Kennedy. The name of the railway was changed to the St. Paul, Minnesota and Manitoba Railway. With the taking of a new name, new methods came into force. Hard work, efficiency, honesty, and economy replaced the old methods. The line was built to Pembina, where it connected with a railway built between that town and Winnipeg by the Canadian Government.

The members of the syndicate put their own money into the venture; the Bank of Montreal advanced large sums; bonds were issued; the enterprise was successful beyond the most sanguine expectations of the syndicate. Immigrants began to arrive in enormous numbers; the American and Canadian Northwest were opened up to settlers; a country over which buffalo, deer, and wolves had roamed, became covered with thriving farms, and dotted with villages and cities. The adventurers who formed the syndicate were rewarded for their courage, foresight, and exertions by the acquisition of great fortunes.

It was to this group of men that Sir John Macdonald turned when he realised that the building of a transcontinental railway must be done by private enterprise, not by the Government. "Catch them before they invest their profits" was John Henry Pope's advice—and Macdonald caught them. According to the terms of the charter, the syndicate was to complete a railway from Montreal to the Pacific by 1891, and to operate it for ten years in consideration of the sum of $25,000,000, a land grant of twenty-five million acres, and the cession by the Government of the parts of the line already built; parts upon which $28,000,000 of the country's money had already been spent.

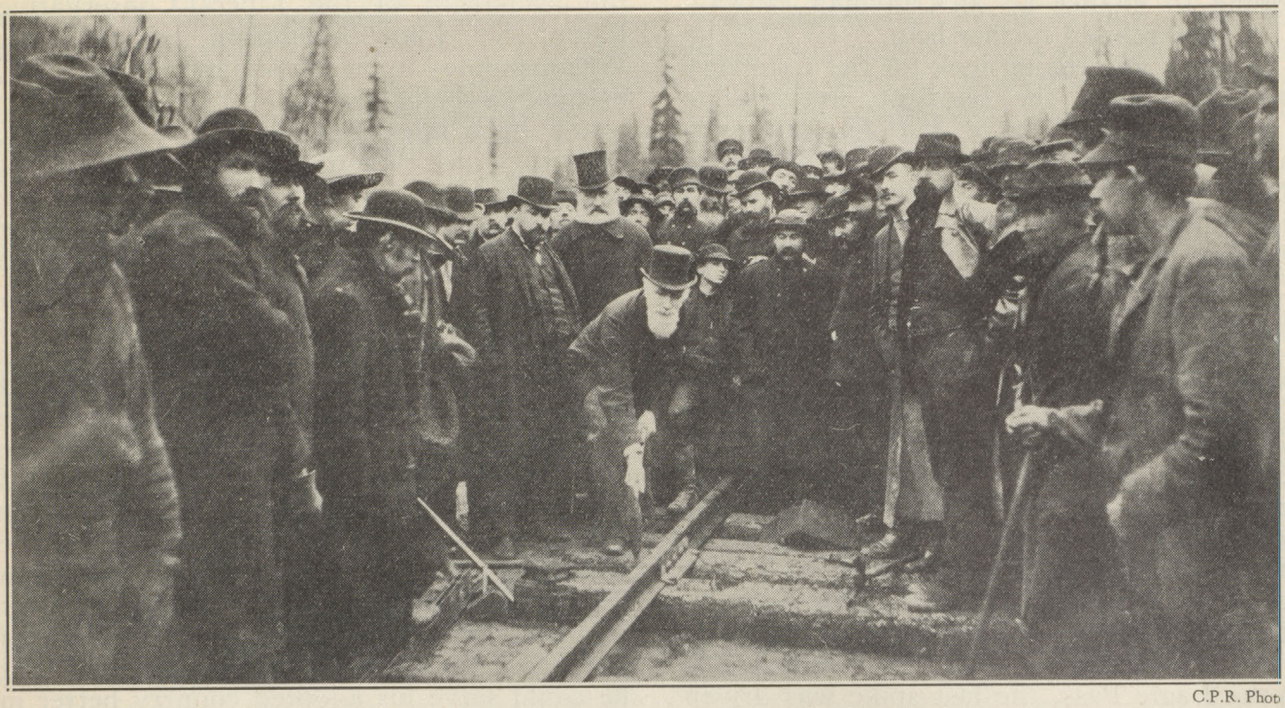
The story of the building of the railway compels our admiration for the builders. It was no mere hunger for gold that led them into shouldering so huge a burden. Stephen, Smith, Angus, Kittson, and Hill had already made great fortunes. They were not young men. Smith, the eldest, was sixty. Hill, the youngest, was forty-four; but he dropped out a year after the work started. They were men to whom it was natural to play for great stakes; adventurers of the same kidney as the Elizabethan seamen. Had they been born three hundred years earlier, they would have taken a hand with Drake and Raleigh in the game of singeing the beard of the King of Spain. Bars of gold instead of steel rails would have formed the foundation upon which they built their fortunes—if they had not left their bones on the Spanish Main. They were made of durable material, these pioneers; Stephen, Smith, and Angus lived to over ninety; Hill was cut off at the comparatively earlier age of seventy-eight. Had these men not taken the task in hand, the building of a Canadian transcontinental railway would have had to wait for years, and the western border of Ontario might now be separated from British Columbia by United States' territory.

When the terms of the charter were announced in Parliament, the Opposition rose in a frenzy of patriotic indignation and declared that Macdonald had sold the country to a band of robbers. But "the tumult and the shouting" died away; the compact was formally ratified; and the Canadian Pacific Railway Company came into existence. On Hill's recommendation, William Cornelius Van Horne, General Superintendent of the Chicago, Milwaukee and St. Paul Railway, was offered the position of General Manager.

Van Horne, then thirty-eight years of age, had already the reputation of being a railway builder second to none in America. The magnitude and difficulties of the task he was asked to engage in, appealed to him. It was no deterrent to him that failure would be his ruin. Indeed, no such enterprise in railway building had ever been attempted before. No one was in a better position to know the difficulties than Sandford Fleming, and he had said,—"In regarding such an enterprise, we pass at once from the sphere of ordinary undertakings, for the Pacific Railway would surpass in every element of magnitude and cost, and probably also in its physical difficulties and commercial results, any work ever undertaken by men." Van Horne left Milwaukee and came to Canada.

The work was begun in 1881, and pushed on with such vigour that it was completed in half the time specified in the contract. Numberless unforeseen difficulties arose and were overcome, but they all increased the cost. In one place on the shore of Lake Superior, a single mile cost $700,000, and several others, $500,000 each. West of Port Arthur, a muskeg of voracious appetite swallowed up seven layers of rails one after the other.

On the prairie, the line advanced at the rate of three and a half miles a day. It had reached Calgary before the engineers knew whether the Rocky Mountains could be



C.P.R. Photo

A NOTABLE EVENT IN CANADIAN HISTORY

This photograph, one of the well-known series taken at Craigellachie at 9.30 o'clock on the morning of November 7, 1885, shows the Honourable Donald Smith (Lord Strathcona) driving the last spike to complete the transcontinental line of the Canadian Pacific Railway.

crossed by the proposed route over the Selkirks. There was good reason to believe that no pass could be found; but Van Horne pushed steadily on, ever calling for supplies from the East. However low the money in the Company's treasury, he always got his supplies. The work of buying and forwarding them was in the hands of his trusty lieutenant, Shaughnessy, in Montreal; as was the less pleasant and not less difficult task of placating the Company's creditors, who "had no mind to be kept waiting for their money by a lot of millionaires."

In 1883, the Company was obliged to apply to Sir John Macdonald for a government loan of $30,000,000. It was grudgingly advanced. There is a story of Stephen sitting one hot July night in 1885 in the ante-room of the Council Chamber at Ottawa; he was again a petitioner for money; he sat on for three hours with the "hope deferred which maketh the heart sick" and then was told that the Cabinet had adjourned and the Ministers had gone home by another door. One day, at a Directors' meeting in Montreal, Stephen said in despair—"Gentlemen, it looks as if we must *bust*!" To which remark Donald Smith, in a tone of mild reproof, answered—"It may be that we must *succumb*, but that must not be as long as we individually have a dollar."

In 1885, wages were in arrears; the press was publishing disquieting rumours; the banks could lend no more money, either to the Company or the contractors; and no more could be squeezed out of the Government. The Canadian Pacific Railway was tottering. Then the Northwest Rebellion broke out. The Directors saw their chance. They offered to transport troops from Ottawa to Fort Qu'Appelle, and said that they could do it in eleven or twelve days. No one believed that such a thing could be done. However, the offer was accepted; within forty-eight hours, two batteries had entrained; and four days later they arrived in Winnipeg. At the first Riel Rebellion in 1870, it had taken more than four months to send troops to Fort Garry. Among the many obstacles overcome by Van Horne, in managing the affair, was a hundred-mile gap in the line, north of Lake Superior. The rebellion was subdued, and the Government distracted public attention from the mismanagement which had led to it by pointing out the wisdom they had shown in

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helping to finance an all-Canadian railway. They then refused further help.

So black was the outlook for the Company then, that even the buoyant, irrepressible Van Horne must have felt his optimism failing, for he telegraphed—"Have no means of paying wages, pay-car cannot be sent out, and unless we get relief we must stop." One day in July of that year, the Company was within three hours of bankruptcy for the lack of a few hundred thousand dollars. At the last minute, Sir John Macdonald awoke to a realization of what failure of the Canadian Pacific Railway would mean to his Government, and in July a last loan of $5,000,000 was made and authority was granted to issue $15,000,000 first mortgage bonds. Stephen went to London to dispose of the bonds. The firm of Baring took over the issue, and from that time, the question of solvency was settled once and for all.

On November 7, 1885, at Craigellachie in the Eagle Pass, the last spike was driven in by Donald Smith, now white-haired and white-bearded, but still vigorous enough to wield a sledge-hammer with effect. The line was complete now from Montreal to Vancouver. Of the part played by Donald Smith in the building of the railway, MacBeth, the historian of the Canadian Pacific Railway, wrote,—"My impression is that Donald A. Smith, with that craggy head and beetling brow of his, was the most doggedly determined director of them all." And Sir Charles Tupper said in 1897,—"The Canadian Pacific Railway would have no existence to-day, notwithstanding all that the Government did to support that undertaking, had it not been for the indomitable pluck, energy, and determination, both financially and in every other respect, of Sir Donald Smith."

It was in May, 1886, that Smith was honoured by being made a Knight Commander of the Order of St. Michael and St. George.

Donald Smith dropped out of political life when the building of the Canadian Pacific Railway began. While the building was being carried on, he became closely connected with the fortunes of the Bank of Montreal, to the financial support of which the success of the Railway was in large part due. He was elected Vice-President in 1882, and President in 1887. He reappeared in Parliament, when the line was completed, as member for the western division of Montreal. In 1894, it was suggested that he should be offered the leadership of the Liberal-Conservative Party, Sir John Thompson having died. When sounded upon the subject, he declined, because he considered that Sir Charles Tupper would be a more suitable choice. In 1887, he and Lord Mount-Stephen together set aside a sum of a million dollars to build the Royal Victoria Hospital in Montreal. They gave, in addition, $800,000 as an endowment fund.

In 1896, he became High Commissioner for Canada in London. No more popular choice could have been made. Canadians were proud of their "grand old man." He was acceptable to both political parties. His seventy-five years had not dulled his intellect, nor appeased his zest for work. A generation spent in the wilderness and another in active life in the fierce competition of the busy world, had given him wisdom and experience beyond the lot of most men. He wanted little for himself but much for Canada, and he believed that he could serve his adopted country better in England than at home. The crying need of Canada at the time was for population to fill up the west. Sir Donald Smith wanted to see it settled with people of British race. He proclaimed the existence of vast areas of fertile land suitable for wheat-growing and to be had for the asking. Emigration from Great Britain rose from 10,000 a year during the last years of the 19th century to 50,000 in 1904, and 138,000 in 1912.

Donald Smith was one of the leaders in the imperialist movement, which reached its most active growth during the last decade of the 19th century. His creed was that of Chamberlain, of Rhodes and Harmsworth and Kipling, —"The day of small kingdoms, with their petty jealousy, has passed. The future is with the great empires, and there is no greater empire than the British Empire." Into the forging of any link which could bind the distant parts of the Empire to the Motherland, he put all his indomitable energy.

Preferential tariff and cheap postal rates within the Empire were subjects of vital interest to him. He was so desirous of seeing a fast line of steamers between Great Britain and Canada that he offered to subscribe half a million dollars towards it. He dreamed of steamers crossing the Atlantic between Great Britain and Canada in from three and a half to four days, by a 20-knot service, and passengers reaching Vancouver from Liverpool in eight days. There was always a thrill for him in the expression "the all-red route."

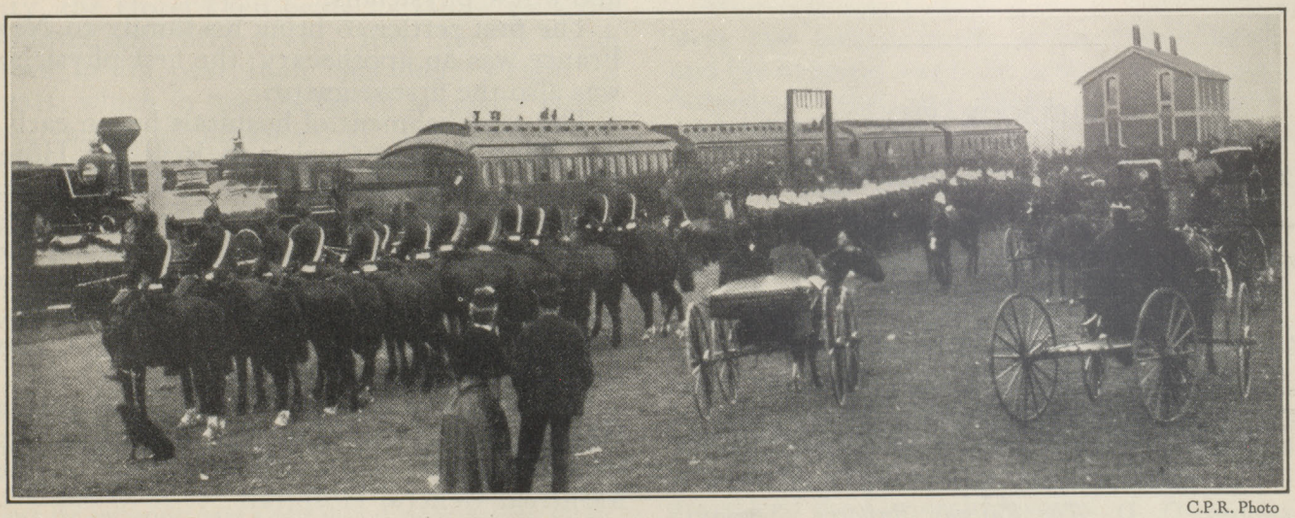
Well knowing that no empire can endure unless it is willing and able to defend itself against aggression, he contributed $250,000 towards a fund to be spent in the physical and military training of boys in the public schools of Canada. He wished them to be taught the elements of drill, the use of the rifle, and to feel that the first duty of a citizen is to be able to defend his country.

In recognition of great public services, he was made a peer. It was characteristic of him to refer to his new honour, in a letter, as a compliment more to Canada than to himself,—"I regard it as one, not so much paid to me, as to Canada, and I think it will generally and properly be so regarded." He took the title of "Baron Strathcona and Mount Royal." The word "Strathcona" is the Gaelic equivalent of the word "Glencoe." Near this place he had bought an estate. So high was the estimation in which he was held in Canada that the suggestion was made, and it was by no means unpopular, that he should succeed the Earl of Aberdeen as Governor-General. Feeling very strongly that this appointment should be held by someone who was not a Canadian, he would not allow the proposal to be urged.

In October, 1898, the Boer War broke out. Bad news soon began to arrive. In one week in December, the "Black Week," the Stormberg disaster occurred; Cronje repulsed the British attack at Magersfontein; and Buller's advance to the relief of Ladysmith was checked at the Tugela River. On December 31st, Strathcona offered to raise, arm, and equip at his own expense a mounted regiment. The men were to be selected for their proficiency as rough-riders and marksmen. The British Government accepted the offer. One squadron of "Strathcona's Horse" was recruited in Manitoba, one in the Northwest Territories, and one in British Columbia. The regiment left Halifax for South Africa on March 21st, 1900. When, after a year's campaigning, it left for home, Lord Kitchener, the Commander-in-Chief, bore witness to its value in the field when he told the men, in a farewell speech—that he had never heard anything but good of the corps, and that they would be greatly pleased if he told them of the number of letters he had received from general officers all over the country asking for Strathcona's Horse.

In 1910 he made a donation of $450,000 to McGill University to pay for a new Medical Building.

As time went on, Strathcona became one of the great figures in London. His story, his immense fortune, his services to the Empire, his benevolence, his hospitality, his simple dignity, his great age, his venerable appearance with his patriarchal beard and beetling, white eye-brows, gave him a place in English society which was unique. The apprentice-clerk of 1838 had become the friend of royalty. King Edward is said to have spoken of him as "dear old Uncle Donald."



C.P.R. Photo

THE VISION BECOMES A FACT

Less than eight months after the last spike of the C.P.R. was driven at Craigellachie by Donald Smith, through passenger service was inaugurated. The first train left Dalhousie Station, Montreal, on June 28, 1886, and is here shown at Calgary, Alberta.

His industry only ceased with his life. Most of his ninety-third birthday he spent working in his London office. "You will be gratified to learn," Sir Thomas Shaughnessy told an Anglo-Canadian gathering in London, "that, yielding to the earnest entreaties of Sir Thomas Barlow, Lord Strathcona has decided to relax his energies. He has succumbed to the united pressure of his medical man, his family, and his friends, and has been induced to promise to leave his office at seven-thirty each evening, instead of seven forty-five."

On November 12th, 1913, Lady Strathcona died at the age of eighty-nine. It is to her and her daughter, the Hon. Mrs. Howard, that the Medical Faculty of McGill University owe a donation of $100,000, which was given for the purpose of building a new wing in the old Medical Building. After his wife's death, Strathcona's health, which had not been good for some time, became steadily worse, and ten weeks after he had seen her buried, he followed her to the grave.

It was first suggested that Lord Strathcona's body should be buried in Westminster Abbey. The Dean and Chapter offered a place; but he had left directions that he should be laid beside his wife, and he was buried at Highgate. A public funeral service was held at the Abbey. A single wreath, sent by Queen Alexandra was carried behind the coffin. Attached to it was a card in the Dowager Queen's handwriting—"In sorrowful memory of one of the Empire's kindest of men and the greatest of benefactors, from Alexandra."

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Book Reviews

History of Medicine in the Province of Quebec: By MAUDE E. ABBOTT: *McGill University, Montreal, 1931.*

IT is only fitting that a book on the history of medicine in this province should begin with an account of the ideas concerning disease held by the aborigines. Although most of their theories were absurd, there was a certain amount of rational medicine practised by them. They used emetics, purgatives, potions, plasters and sweat-baths and regulated the diet. What mattered it if they believed that these measures made the body an uncomfortable habitation for the demon whose unwelcome presence was causing the disease?

There is something very grim in Dr. Abbott's story of the ravages of scurvy among the early explorers of Canada. Cartier and Roberval saw their followers melting away in a land where abundance of nourishing food could be obtained in return for a little effort; and in the midst of forests where anti-scorbutic remedies were to be had for the picking. It was a gallant fight that the pioneers of New France waged in order to maintain their foothold in the country; and the greatest of their foes was ignorance.

Dr. Abbott takes us back to the days when the bulk of the medical profession was composed of barber-surgeons and apothecaries; though there were some "master surgeons" and a few physicians.

The first settler to bring his family to New France was an apothecary; the first physician was also the first seigneur.

The establishment of hospitals began early; the Hôtel Dieu at Quebec in 1639, the Hôtel Dieu at Montreal in 1644. Three other hospitals were founded before the end of the seventeenth century. The nursing was in the hands of the nuns. There were frequent vacancies for novices on those nursing staffs, for each epidemic carried off its quota, but the vacancies were quickly filled.

Few Montrealers know that there was a Hôpital Général de Montréal more than two hundred years before the founding of the Montreal General Hospital.

It is not to be wondered at that during the seventeenth and eighteenth centuries there were few medical practitioners in New France

(Continued on Page 45)



THE MONTREAL GENERAL HOSPITAL

This old print, reproduced from *Hochelaga Depicta*, edition of 1839, shows the hospital in the early days of its existence.

The Early Days of the Montreal General Hospital

By H. E. MacDERMOT, Med. '13

THE MONTREAL GENERAL HOSPITAL is the second oldest hospital in the city, the Hotel Dieu being its senior by some hundred and fifty years. But there is much more in its past than this mere weight of years, which in itself is not of necessity either interesting or noteworthy. Its records are interesting both from a medical and a general point of view, for they recall the life of Montreal as it was more than a century ago, and reflect a good deal of the growth of the city since then. I can only give a few extracts here.* A more detailed account of the history of the hospital has been written by the late Dr. F. J. Shepherd, in his characteristically terse and incisive manner; few had watched the hospital's progress through so many eventful years, or had taken a more active or notable part in its life.

Montreal was a small place in 1819. There were few houses north of St. James Street, and the hospital was built in the "St. Lawrence Suburbs," the site being chosen for its "salubrity." The residences were then all spread through the business district, merchants often living over their stores and offices. The city was really a narrow strip along the St. Lawrence. According to the records of the oldest curling club in the city, the River was much used in the winter for curling, one game even being mentioned as being played at five o'clock in the morning. In the records of this same curling club, by the way, occur the names of many of the men who were to play a prominent part in the growth of the General Hospital.

This small city, however, was—and always has been—afflicted with growing pains, and these were aggravated by its being the natural settling-basin for streams of immigrants from

*My sources for this paper are: (a) The hospital records, which the authorities have kindly allowed me to examine; (b) Dr. Shepherd's "Origin and History of the Montreal General Hospital"; (c) Dr. Maude Abbott's "Rise of the Montreal General Hospital" (Montreal Med. Jour., 1902, xxxi, 564); some unpublished material which Dr. Abbott has been kind enough to show me in connection with Dr. Caldwell's duel; and (d) The History of the Royal Montreal Curling Club.

Great Britain and Ireland, especially after the Napoleonic wars. Immigrants then meant poor people, and often sick people. They brought, or developed on shipboard, typhus fever and cholera, which was often called "emigrant fever." Time and again the early records of the hospital show how indispensable was its work in caring for these people.

The first root thrown out by the General Hospital sprang from charitable seed sown by "The Female Benevolent Society of Montreal," which had been formed in 1816 to deal with destitution and illness in the city. Soup kitchens were opened, also schools for teaching children "domestic work, reading and writing, and the fear of God." In 1819 a small hospital of four beds was opened in Chaboillez Square, known as "The House of Recovery," a charming and inspiriting designation which might well have been perpetuated. But the demand for something larger became imperative, and business men—putting their hands to a plough which has been guided by business men ever since—bought a house on Craig Street and equipped it with 24 beds, the military authorities providing the bedding. It was now called "The Montreal General Hospital" and had an attending physician, Dr. Blackwood, Staff Surgeon. The medical work so far had been done by volunteers, whom we find being graciously thanked in *The Gazette* by Mrs. B. Gibb, who, as Directress of the Female Benevolent Society, "begs leave in the name of that institution to return its sincere thanks to the several gentlemen of the Faculty for the gratuitous advice and assistance which they have cheerfully and promptly afforded. Many distressed objects have been relieved by their timely professional skill who have no other means of expressing their gratitude than by this public acknowledgement."

The need for yet more room soon became evident, and in 1822 the first building of the present hospital was erected on the present site which had been bought in 1820 by a group of prominent citizens. This site, in the French régime, had formed part of the outer defences of Montreal, being occupied by the strongpoint known as the "Redoubt de l'Enfant Jésu." The original building still stands, though greatly altered inside. The prim little building shown in the hospital seal has had its mitre-like cupola removed (there are frequent remarks in the records about its leaking) and had a mansard roof added in 1890. Two wings, the Reid and Richardson, have been added laterally, two more posteriorly, and a large upstanding appendage on the right flank. With a pathological building, large subliminal spaces for the outdoor and dental clinics, a doctors' residence, and a towering nurses' home, all grouped around and under it, the plain grey stone entrance which has stood through all the years becomes the frame through which we view a pageant of achievement. The staff of the hospital has always been able to say, "There have been great changes in our time."

Not that there have been no periods of depression and loss of momentum. In 1827, for instance, it was felt necessary to reduce the establishment to three wards, requiring but two nurses, one house and laundry maid, one cook, and one manservant. In 1846, too, it was recommended "to close up as many wards as could be done with propriety, to diminish the expenses of the hospital to the lowest limits." And again, in 1850, "it was found necessary to urge that no more wards be opened than was absolutely necessary to prevent contagion, on account of the low state of the funds of the hospital." Occasionally there is recorded the unusual and pleasing phenomenon of income exceeding expenditure, as in 1872 and for some years after that, but until the management began to feel sure of public support, there were anxious days and fears of having to close.

Leaving the larger features of its growth, however, let us turn to some of the domestic affairs of the institution, as found in the records of the Committee of Management. An army is said to march on its stomach; one may equally well say that the Montreal General Hospital has marched on its Committee of Management. In the early years especially one finds the Committee's members not infrequently dealing with matters concerning the medical organization. Strictly medical matters, of course, they left alone, but sometimes they had to deal with infringements of the rules of the hospital regarding the admission of patients, as on Christmas night, 1850, when complaint was made that:

> A person of the name of O'Loughlin was brought to the hospital in the charge of two policemen at the late hour of half past eleven, with an order from Dr. Hall to admit him as a patient. The Steward complained that the individual was in a state of intoxication and not a fit person for treatment at that hour. Afterwards, on being requested by Dr. Hall in person about two o'clock a.m., who returned with the individual and the policeman,

he was allowed to remain, and a bed was provided for him, and the day following he left the hospital of his own accord.

The Committee upheld the Steward, and told Dr. Hall that no medical officer was available for night admission work.

The medical gentlemen themselves gave rise to mild remonstrance now and then. There was the case of Dr. Fenwick, with whom we find the Committee expostulating on November 17, 1848:

> for keeping a dog in his room to the annoyance of the servants, besides being a great nuisance in the institution, after having been civilly warned to put it away, and also for his unwarrantable language and interference with the matron in the pursuit of her duty. The Committee further resolved not to allow Dr. Fenwick any separate table for his meals, as being incompatible with the interests of the institution, and the Committee feeling satisfied that no incivility had been offered to Dr. Fenwick by the Steward or matron.

Next day Dr. Fenwick resigned his position as apothecary. Later on he became one of the surgeons of the hospital and earned a fine reputation for his skill and kindness. Dr. Shepherd tells us he had very little idea of time and used to be called "the late Dr. Fenwick."

Complaint was also lodged about "some irregularity" on the part of a Dr. Buchanan, house surgeon, for being absent too often from the hospital. The chairman, Mr. Redpath, was delegated to interview the doctor, and a faithful promise of amended ways was obtained. But there was evidently some backsliding soon afterwards, and then the matter was referred to the Board of Governors.

Even such mild incidents as these, however, were extremely rare. On the other hand, appreciation of the work of the staff is often recorded, as thus:

> To the medical officers who have been on duty the highest commendation is justly due not only for their assiduous attention and kindness to the patients, but for the pains which they have taken to render the hospital a school worthy of attendance of students of Medicine.

This was in 1823. No time had been lost in the starting of a medical school in connection with the hospital. This school, the Montreal Medical Institute, later consented to merge itself with the Medical Faculty of McGill University. Dr. Shepherd used frequently to say that there probably would have been no McGill University at all if this medical school had not agreed to become the Medical Faculty of the University, which at that time (1828) was doing no teaching itself and stood to lose the McGill bequest if it failed any longer to function.

Students therefore have always been a recognized element in the hospital life. By-laws for their governance were framed very early. There is, amongst other things, the direction "to remove the hat while in the operating theatre, both that he may not obstruct the view of others, and as a mark of respect."

One student complained to the Board of Management that the case reports were not properly kept. Dr. Caldwell, the chief medical officer, replied indignantly:



Photo by courtesy of Dr. F. J. Tees

"WITHOUT REGARD TO RACE OR CREED"

Not many years ago this tablet at the corner of Dorchester and St. Dominique Streets was familiar to every passer-by. It proclaimed the policy that has prevailed throughout the hospital's existence.

McGill University Library

> It is very presumptuous and extremely indelicate on the part of the individual who has made the complaint, and the most ordinary sense of delicacy ought to have pointed out the propriety of making the medical attendant acquainted with the cause of his grievance in the first instance. The case-book is kept in the manner I conceive best calculated for the regular exhibition of the prescriptions for the Patients, and to convey any information requisite for the student, provided he is regular in his attendance at the time I go round.

This was the Dr. Caldwell who knew well how to defend himself. When the hospital was in process of obtaining its charter from the legislature, opposition arose in the person of a Mr. O'Sullivan, in whose opinion an additional hospital in Montreal was unnecessary; it would, he said, be run by hirelings instead of women devoted to the service of God, and would lead to the ill-treatment of the patients by the students. Being an Irishman, and a politician, Mr. O'Sullivan's oratory developed a delightfully fiery climax. We were asked to believe, he said (after a preliminary tilt at various windmills of his own construction), that:

> "one object to be held in view by the petitioners was the perfection of medical science. An hospital contributed to that perfection because, no doubt, it afforded the best opportunities to make experiments. Now, one of the consequences of the perfection of the said medical science was to render the hospital totally insufficient for the public wants. Thus, an hospital and the perfection of medical science have alternately cause and effect, and must constantly reproduce each other in a very destructive ratio."
>
> When he (Mr. O'S.) "reflected not only on the fatal perfection of the redoubtable healing art, but on the great increase of the Faculty in Montreal he trembled for the fate of his fellow citizens. Certain it was from the evidence of these gentlemen as stated by the Special Committee, that both these causes must prevent in future that rapid increase of population which had induced the unsuspecting petitioners to make the present application."

But this nonsense was no joke in Montreal, and Dr. Caldwell expressed his indignation in a letter to the press, which the editor of the paper later admitted to have been a little too forcible for publication. Mr. O'Sullivan demanded the name of the author and Dr. Caldwell was called out. The duel was fought with pistols and five shots were fired on each side. Dr. Caldwell had his right arm broken, and Mr. O'Sullivan was hit in the chest. Both recovered and the hospital obtained its charter in due time.

The medical records of the hospital for the first 30 years or so are scanty. Case reports as we know them did not exist. Quarterly reports of the numbers of cases treated were issued, and these contained names of diseases which sound strange to us. Typhus fever is now a rarity in Montreal, but in the early years of the hospital, indeed up to the middle of the century, it filled many beds; in 1848 sheds were built outside the hospital to take care of 250 cases. Two matrons succumbed to it, and Dr. Caldwell himself survived his duel only to die of typhus ten years afterwards. Fevers formed the bulk of the cases, including the still all-too-familiar typhoid. When a fever could not be diagnosed it was put down as a "synochus," a term we could still occasionally employ, as it only means an obscure, long-continued fever. In 1850 the Committee record that in their opinion "it is a matter for congratulation that they are able to state at the present that no cases of malignant fever or of any contagious disease is within the hospital." Cases of cholera were never admitted to the hospital as such, although in 1849 the Board of Health asked that they be taken in. The disease did appear in the wards, however, from time to time; and the first matron died of it.

We have little to tell us of the methods of treatment. Bleeding was as much in vogue as anywhere else, and orders for bleeding basins are found. Drugs, of course, occupied a much larger place in medical practice than they do now, and there is no doubt that alcoholic stimulants were given freely. Whiskey in the first year was ordered by the ten-gallon lot, and the Committee frequently discuss the supply of liquor needed. The proposal is made (1845) to buy "a pipe of port wine (the expenditure of that article being considerable) to be dealt out a few gallons at a time to the Steward." A few months later the Steward is directed to bottle the wine "as it is now well settled." Discrimination was exercised, as another entry records the Committee "sampling" brandy and port wine before ordering a hogshead of each. Dr. Shepherd says that even in his day every patient was given some stimulant, two bottles of ale or stout, four to eight ounces of port wine, or four ounces of whiskey or brandy. The Committee felt constrained to expostulate at least once at the excessive consumption of wine and brandy during the quarter, as "the last pipe of wine was consumed in little more than three weeks."



"THERE HAVE BEEN GREAT CHANGES IN OUR TIME"

The young McGill graduates shown in this Operating Room photograph of 1892 are known throughout the Dominion to-day. From left to right they are: Dr. Charles F. Martin, now Dean of the Faculty of Medicine; Dr. W. Harvey Smith, former President of the Canadian Medical Association; and Dr. R. Tait McKenzie, whose work in sculpture has won world-wide renown.

Smoking in the wards was forbidden, very naturally, although there is a hint that in addition to the fire risk the governors felt that there was a moral (?) element involved. The Visiting Governors' Book contains the entry:

> We find that some of the Patients lately, in violation of the rules, smoaked occasionally; we did what we thought necessary to counteract this dangerous propensity, but we make this note more to put the governors that may succeed us on their guard, so that they may also continue their endeavours to put down this evil immediately, as some of the Patients to avoid detection, have been known to hide their pipes hastily in their straw beds, to the great danger of the building.

The Committee called in the matron and cautioned her to "use her utmost endeavours in preventing that dangerous vice in the Hospital called smoaking tobacco." But the matter came up again when the governors reported on November 29, 1824:

> that the means of preserving a light during the night in the wards is not as certain or as safe as it should be. The present mode of burning a floating light of oil in a tumbler is attended with many inconveniences, the patients get at it during the night, move it about, and often put it out, and it is feared attempt to light pipes and segars at it.

The Governors' Visiting Book for 1823 is chiefly a record of visits, with everything "found in good order." But their inspection was not a perfunctory one, and little escaped them. Messrs. Richardson and Molson record in June that they "tasted the soup carrying up to the patients and found it very palatable." And it was the governors who first thought of having screens in the wards:

> We think it would be an improvement were a few moveable screens of some cheap and light material made, so that they could be sliped in between the beds occasionally—such screens seem particularly wanted in the women's ward.

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Nothing was done about it, however, and the next month another governor took it up:

> I reiterate the suggestion heretofore made of a further improvement which might materially add much to the relief and convenience of the sick, with little encrease of trouble at a trifling expense. As the Patients are now lodged, there are numbers in the same room at all times exposed to the view of each other. To some this may be a matter of indifference, but to others of more delicate mind or habit, and to any in certain states of feeling, to be perpetually exposed to the gaze of others, or to be compelled to see what is passing, may occasion no slight degree of painful sensation, and to these some greater degree of privacy might be a source of comfort and gratification, and so far of salutary influence.

The Committee however replied decisively that,

> they have consulted with the medical gentlemen in attendance, and they do not approve of the above plan, of supplying the wards with screens, as the free circulation of air would thereby be impeded.

The matter of slippers next engaged the governors' attention:

> We recommend that (if approved by the medical men) a few pairs of slippers (*without quarter*) be procured for the use of the Patients.

This was attended to; the Steward was requested to provide "three dozen half-made Beef Shoes to serve as slippers in the wards for the Patients." There is also a recommendation that "a Sedan chair be procured for the purpose of transporting patients from their respective wards to and from the Baths."

Nightcaps for the patients were part of the wardrobe; they appear early in the lists of hospital stores. One other unusual item amongst the early purchases of the hospital is that of "twelve spittoons." These were evidently meant for the wards; later on a complaint appears regarding their misuse by the patients. It may be added that the patients were evidently more unruly than in the present day, as the quarterly reports repeatedly show some as discharged for "irregular conduct."

On one inspection the Rev. Mr. Bethune and Mr. Grant reported that,

> observing some visible marks of improper conduct on the face of the cook, we inquired the cause of it from Mrs. Stephenson (the matron) to which she replied that the servant-man Joshua had beaten her.

The matron had a good deal more to tell them about Joshua and the cook, as well as Mrs. Flynn, one of the nurses, who seems to have been somewhat of a tartar, but investigation by the Committee showed nothing more than that "the cook had struck Joshua."

It was about 1848 that private wards were first thought of. The Committee considered

> the suggestion of Dr. Crawford to fit up a room in a superior manner for gentlemen patients that would be willing to pay extra for the superior accommodation and attendance afforded. Agreed to do this and charge 5/ per day.

Nursing as we think of it was a fairly late development. As Dr. Shepherd says: "There were few nurses and no training of nurses. At that time nurses were born not made, mostly of the "Sairey Gamp" variety, often good motherly women, but many were addicted to the bottle." The first matron, Mrs. Stephenson, was appointed with the qualifying remark "ad vitam aut ad culpam" at a salary of thirty pounds per annum; a wage which might not drive her "ad culpam," perhaps, but which would hardly tempt her to remain "ad vitam." She did however prove an excellent servant to the institution.

No serious attempt was made to improve the nursing situation till 1875, when four nurses were brought out from Miss Florence Nightingale's school at St. Thomas' Hospital, under a Miss Machin, who was a Canadian. For three years they did excellent work in the hospital and would probably have established a training school if circumstances had not brought about their resignation and return to England. It was the late Miss Norah Livingstone who in 1890 organized and built up in the hospital a training school which reached the first rank amongst such schools on this continent.

The men who nourished the hospital throughout its infancy were a small group, but they were a nucleus around which support gathered. One family can claim an unbroken term of service since the opening of the hospital; there was a Molson on the first Board of Governors, and the tradition is being carried on by Colonel Herbert Molson, the President of the Board to-day. That is an association which is unique in the history of the hospital.

The Canadian Railway Problem

By GORDON McL. PITTS, M.Sc., B. Arch.

THE railroads are fundamental to the transportation system of Canada and are essential to our industrial and agricultural prosperity. They perform a function provided by no other carrier. They own and maintain their own rights-of-way and rolling stock. They provide an all-the-year-round service on definite running schedules and at fixed rates, rates arbitrarily determined by an independent body in the Railway Commission, and not directly deduced from the cost of the service.

They transport our people in luxury, and carry our products of field, mine, and factory, to points inaccessible to other carriers, at prices with which others cannot compete. They bring up the rations of the nation. Through their uninterrupted service, the wheels of industry are maintained in motion. Their employees are the most highly organized and paid in the field of labour. They may truly be called "the backbone of the country," by reason both of the service they render and the number of the population engaged in their operations.

The paying activity of our railroads is the movement of freight. To perform this in the most economical manner, the roads have developed long, heavy trains, with tremendous power units; great bridges to carry the increased loads of the newer engines; heavier rail sections; easier grades and longer sidings; and vaster yards and terminals, to accommodate these mammoth trains. Equipment and right-of-way investments have been greatly increased with a view to reducing the average ton-mile cost to 1.2 cents. This represents their effort to meet the rate reductions of the Railway Commission, made under pressure of sectional influence, and is an instance of the western farmer being indirectly subsidized by the rest of Canada.

The passenger business is a necessary, though non-remunerative, adjunct of the railroad business. As that phase with which the public comes most closely in contact, it has an advertising value for the other business of the roads. Thus we have every conceivable convenience provided for the travelling public, including baby-blue upholstery, telephones, radios, compartment cars, and private rooms, costing millions, which the extra fares obtained do not begin to return. In conjunction with this non-remunerative passenger traffic, we have monumental terminals and palatial hotels, present and in the making, not to mention free transportation and accommodation for those who can advance a reasonable claim to same, political or otherwise.

For years past the policies and trend of railroad development have been along the same line, carried, as it were, by their own momentum. They functioned and developed as guaranteed, though regulated, monopolies. They did not seem to sense that science, industry, and a sophisticated public were promoting a revolution in transportation generally, and would require more progressive methods from the railroads themselves.

The railroads appear to have been so absorbed in their own private warfare that they have belittled, or ignored, the rapid strides being made by a new competitor, highway transportation. This newcomer is providing a passenger and truck service which meets a popular demand for directness, speed, and flexibility. The railroads, with their unwieldy organizations, complicated routings, car-loading delays, demurrage charges, many handlings, and restricted schedules, cannot give a comparable service under their present methods.

The newspapers recently have featured the plaint of the rail carriers that the trucks are taking the cream of their short and medium haul business. This would appear an admission of the railroads' lack of foresight and business acumen, for the trucks are simply taking advantage of a modern development equally accessible to the railroads and, as a matter of fact, already widely used by the more progressive.

Busses and trucks will eventually be equitably regulated, licensed, and taxed, in accordance with their use of the public highways, but they cannot and will not be legislated from the roads. Tariff rates will be fixed,

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but traffic schedules cannot be imposed in winter till the governments can guarantee open highways. The public and general business require and will demand the type of service this carrier can render. Their number will increase with a greater population and better business. At present they are a very minor activity in Canada, and a solvable problem. This new and efficient competitor raises more than a suspicion that the railroads will have to re-vamp some of their conceptions if they are to hold the public patronage their large capitalization requires.

Canada boasts of the world's greatest transportation system, in the Canadian Pacific Railway, and the world's greatest railroad system, in the Canadian National Railway, each complete to the last item in passenger equipment, hotels, camps, lodges, golf courses, and so on. We have maintained our two world champions under conditions of the keenest rivalry. This competition, far from being the "life of trade," has been of the most expensive, uneconomical, and destructive character, insidiously undermining the financial structure of the nation, impairing our credit abroad, and increasing the tax burden of our people.

The Canadian National Railway, brought to a high state of development over a short period of time, by dint of the lavish expenditure of public funds, is maintained at a high pitch of competitive activity without consideration of the cost, or the return on the capital invested. No addition, innovation, or competitive activity is too costly, if it gives promise of drawing ever so small a patronage from its competitor. Competitive and not supplementary duplication has been the policy of the National road, with well known examples from Halifax to Vancouver. In addition, this road has its principal outlets in a foreign country, thereby diverting a large volume of business from our national ports.

On the other hand, the Canadian Pacific Railway is a privately-owned company, developed over a period of time in conformity with its financial resources and the needs of a growing country. Its development and expenditures are made with a view to the return to be realized from the business they create. It is essential to its continued existence as a private company that it be a paying proposition. Non-productive and extravagant expenditures spell ruin. Its management cannot depend on government subsidy.

Our slowly growing population provides a definitely limited maximum volume of traffic, which the keenest railway competition cannot increase. Every dollar spent in this form of extravagance stands for misconception, mismanagement, and waste. The policies and expenditure of the National and government-subsidized road are forcing the private company to similar extravagances to hold its share of a definitely limited business. If these policies continue, all the railroads in Canada will be nationally owned, and we will be taking up a burden the United States laid down with relief after their war years, when they returned the railroads in a very delapidated condition to their private owners, after having lost millions in their government operation.

This is not an indictment of the Canadian National management, which includes some of the brightest minds in the railroad business. Their objective is the building up of the Canadian National Railway and the rounding out of that system to the last item of modern railroad development, and to this end they hasten to utilize every resource placed at their disposal by the Government. The gauge of their success is the amount of business they can take from their privately-owned competitor.

Denied though it may be, the policies and developments of the National road have a strong political colour. It lends itself most admirably to political exploitation, both by the individual and for sectional advantage. One political party is blamed for the tremendous expenditures and so-called extravagances of the road, while the other party is censured for proposed curtailment in expenditure as being contrary to the best interests of the country and the employment situation. With the control as now constituted, the chances of the commercial success of this railroad are nil.

And so Canada has her transportation problem. It is the more pressing for solution by reason of this protracted period of business recession. The acid of hard times has developed up our transportation picture in its true values.

We find ourselves a population of ten million people possessed of 48,851 miles of railroad, with 236,000 carriers, representing with their accessories an investment of over $3,000,000,000. We have an ever-increasing waterway and harbour development representing over $600,000,000, together with a

highway system of 394,372 miles of road, 85,500 miles of which are surfaced, costing with equipment over $2,000,000,000, not to mention the stupendous private investment in shipping. Our investment in aviation is beginning to mount as this new form of transportation comes into increasing popularity. It may well be said that Canada is in the transportation business.

In the past each of these services has developed as an independent activity. Economic conditions of to-day demand a more scientific organization and co-ordination of these services, to the extent and in such a manner that the best features of each may be utilized in combination to procure for the people of Canada the maximum of service at the minimum of cost. How can this objective be attained?

It is evident that aviation is making progress and within a few years will provide a very practical form of transportation with a rapid passenger, mail, and valuable freight service. From their experience with bus and truck traffic, it would appear to be advisable for the rail carriers to incorporate aviation into their services as it develops, rather than procrastinate until it is an active competitor. Such an alliance would greatly assist in the development of aviation in Canada, and would promote the construction of private and Government air ports.

Water transportation has nothing new to offer as to method. Its development, however, presents a feature in the St. Lawrence Waterway which demands the most careful consideration. This development involves international relations of a delicate and intimate character. It represents a very considerable expense to the country at large for the benefit of a section already particularly favoured in the newly-completed Hudson's Bay route, with which the proposed St. Lawrence Waterway would be a direct competitor. This development also increases a facility already in competition with the railroads.

It is very questionable whether Canada, in the present state of her national development and finances, is warranted in adding another expensive seasonal unit to her already over-elaborated system of transportation. Certain it is that nothing should be done in the promotion of this scheme until a practical solution has been put in operation for our present transportation difficulties.

Whereas it is apparent that the problems of the other carriers are susceptible to a simple solution and regulation, the railroads present a much more complicated set of conditions. The present depressed condition of their business reflects that of nearly every other business in the country, with some of the mistakes of the Wheat Pool thrown in for good measure.

If the return of normal business was all that was necessary to bring railroad transportation back to solid ground, the answer would be to hold on and wait for the turn. Unfortunately, the depression has clearly indicated some fundamental misconceptions in our railroad policy for which a truly economic and practical solution must be found at once.

Consideration of the foregoing suggests the urgent need to co-ordinate the services of the two great railroads in such a manner as to permit of the common use of right-of-ways, terminal facilities, and certain equipment, to their mutual advantage and to the elimination of all duplication and competition.

The acceptance of the principle of co-operative service by the railroads puts an entirely different aspect on development programmes at present in contemplation and under way. It removes the urge and necessity for the tremendous expenditures involved in certain of these with no corresponding increase in business or return on investment.

As an example of how such co-operation would prove of great mutual value, consider the terminal facilities and railroad services on the Island of Montreal. What I have to suggest is a consolidation of railroad services that would eliminate, for all time, any possibility of competitive development or duplication of trackage within the valuable area of the Island, and which would insure the most direct and cheapest circulation from point to point, utilizing all existing developments as far as practical. The proposition involves the principle of not laying a foot of additional trackage on the Island of Montreal, until the whole of the existing trackage has been properly correlated. It also involves a consideration of the terminal question, and a solution which would be in line with the principles outlined above.

The scheme which follows has been discussed with prominent engineers, town-planning experts, and other interested parties over a period of twelve months, and it is the

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consensus of opinion that it is a simple and direct solution of the problem. It is presented by me as a citizen of Montreal in the best interests of the City, and without any consultation or any expression of opinion from the two railway companies concerned. It is believed that, when the directness of this scheme is appreciated and the manifold advantages to each railway are fully developed and made apparent, their support of the idea will result.

The logical point of approach to this great problem is at the central terminals. If a proper and reasonable solution can be achieved at this point, the radiating and circumscribing lines will fall in their proper places in the same manner as a spider's web is spun, from the centre out.

When it was found that limitations made the Bonaventure Station site impractical, the Canadian National developed the present terminal scheme. There is no question but that it was the ambition of this company to develop a most modern terminal, comparable in every respect with that of its competitor, in so far as money, modern science, and physical conditions would permit. Sir Frederick Palmer was retained by this Company, in an advisory capacity, to promote its interests by any recommendations his wide experience might suggest.

Having in mind possible criticism as to the extravagance of separate terminals so closely situated, the Palmer Report included a suggestion for a union terminal, based on their main scheme, which called upon the C.P.R. to abandon Windsor Street Station and undertake construction work and tunnellings, costing millions of dollars. Obviously, the C.P.R. would not undertake such large expenditures with no corresponding benefit, and by the Company's prompt refusal to do so the public was led to believe that the Canadian Pacific Railway was not in favour of a union terminal. This point has been cleared up by Mr. Grant Hall through the press, and the public is advised that the C.P.R. is not unfavourably disposed to a union station based on a reasonable and economical plan.

If the great competitive urge between these two transportation systems ceases to be a factor, all the economic and physical conditions definitely point to a union terminal. If Windsor Station were in Montreal West, and the new Canadian National terminal in Maisonneuve, the insuperability of the problem would be obvious. As but two or three blocks separate these two great enterprises, the solution is equally obvious, and physical conditions point to a very direct and simple solution of the problem.

The Canadian National terminal is located at the end of the tunnel through the Mountain, and its tracks are continued down over the City to the river front, thus providing a through or open-ended station. From Windsor Street it is evident that the rails of the Canadian Pacific at Windsor Street Station are considerably above the rails of the Canadian National at the tunnel, and a natural grade separation is provided. If the lines of the C.P.R. were extended through Windsor Station and across Windsor, Cathedral and Ste. Cecile Streets, and if the platforms now stretching west from the Windsor Station over Mountain Street were transferred to the east side of that building over Windsor and Cathedral Streets, and if the Canadian National Station were moved one block further south, a union station would be achieved in a very economical manner, with two sets of tracks, one above the other, at right angles.

At present, Windsor Station is a dead-end station. To overcome this, tracks could be dropped down on the north side of St. Antoine Street and carried into the elevated line of the Canadian National which is being extended to the harbour front.

It has been definitely stated that the double-tracks at present installed in the tunnel under the Mountain will be sufficient for all future traffic requirements of the new terminal. This may be right, but if it should be wrong, the extra expense involved in enlarging the tunnel would be a very considerable item.

There is no doubt that the engineers of the Canadian Pacific Railway, in their study of the possible development of Montreal, selected the best railway entrance to the City, located as it is on the brow of the hill, where grade separation presents no great difficulty. It is also evident that this entrance will remain for a very considerable number of years. If in the future it should prove necessary to increase the capacity of this access to Montreal, it would be a simple engineering matter to double-deck the Canadian Pacific, say from Westmount, into the new terminal station, arranging outgoing traffic on the

upper deck and arrivals on the lower. The possibilities of expansion at this entrance are very considerable at a minimum of cost.

In connection with the operation of a union terminal, Canadian National passenger trains could be run over the Canadian Pacific right of way from Dorval on a straight-away to the centre of the city. This would certainly obviate the necessity of boring an enlarged tunnel under the Mountain.

When experts next report on the Harbour of Montreal, it may be found that the capacities of the Harbour Commissioners' tracks are not sufficient for the growing trade. There certainly should be no restriction at the principal point of interchange between ocean and land carriers. In connection with any necessary development of the harbour facilities, and to reduce the duplication and indirectness of railroad circulation within the metropolitan area to a minimum, elevated railroad lines could be carried along the harbour front, connecting with the lines from the union terminal, Victoria Bridge, and the yards and stations in the east and west sections of the City. While elevated lines in some districts might meet with strong opposition, the same criticisms would not apply to this area. Necessary take-offs could be arranged along the harbour front to accommodate ocean passenger and freight traffic.

In summary, it will be noted that the above suggestion, based on the extension of C.P.R. tracks eastward, conforms with the work so far carried out on the Canadian National scheme. The existing Windsor Station building is retained, and no inordinate cost factor has been introduced.

On the other hand, it removes the competitive element from terminal construction; reduces the duplication of railway facilities in the metropolitan area, keeping the actual ground covered by these to a minimum; provides a more flexible railway system within the City, with access to the river front and ocean liners by the most direct route; reduces noise and smoke nuisance; simplifies railroad service for the travelling public through unification and centralization; provides possibilities for all necessary extensions to meet increased traffic for years to come; and correlates to their mutual advantage the best physical features of each company in the best interests of the travelling public and of Montreal.

Book Reviews

(*Continued from Page 34*)

who contributed anything to the advance of science; for the country was desperately poor and the inhabitants were preoccupied with the struggle for existence. The names of only two are remembered in connection with scientific research; those of Michel Sarrazin and Jean Francois Gaulthier. Both these men were genuine scientists. It is significant of the times they lived in that both died of infectious disease, caught from patients during epidemics.

Dr. Abbott has much that is interesting to say about the French and English practitioners of the early part of the nineteenth century. Strange indeed is the story of James Barry who served forty-six years as a surgeon in the British Army, was Inspector-General of Military Hospitals in Canada, and after death was found to have been a woman.

A succinct account is given of the development of medical education from the time when the only means the country afforded of training doctors was apprenticeship; through the time of the private schools to the present era of medical faculties existing under the ægis of the three principal universities.

This contribution to the history of Canadian medicine is a valuable one. The author has collected in a small space an astonishingly large amount of information. It is to be regretted that so much interesting reading matter is not printed upon better paper.

W. B. HOWELL

To the small group of Canadian unit histories published since the Great War—about a dozen in all—an outstanding addition was recently made when, from the presses of the Gazette Printing Company, Montreal, was issued *The 42nd Battalion, C.E.F., Royal Highlanders of Canada, in the Great War*, by Lieut.-Col. C. Beresford Topp, D.S.O., M.C.

In this volume of 413 pages, Lieut.-Col. Topp tells the story of the 42nd Battalion, from February 8, 1915, when recruiting began in Montreal, on through the eventful war years, to that day in March, 1919, when with its mission faithfully accomplished at a cost of 889 dead and more than 3,000 casualties, it marched triumphantly through the streets of Montreal to demobilization.

Many volumes might be used to tell such

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a story in detail and, when they had been written, it would be a fact that half the tale had not been told, yet it would seem that in this book no essential to a very definite understanding of the Battalion's tasks and accomplishments had been omitted. Were it not for a foreword by Lieut.-Col. R. L. H. Ewing, D.S.O., M.C., which gives credit where credit is due, one might wonder how the author gained the intimate knowledge of the Battalion's work that is quite obviously at his disposal. True an officer with the name and initials of the author appears occasionally in the text, but the author seems to dislike the fellow, for references to the responsibilities that fell rather frequently to his lot are curt and inconsequential.

This is the more surprising as, throughout the book, the author, while employing admirable restraint, is quick to give credit for good work accomplished, not only by officers and other ranks of the 42nd, but by the units with which, at one time or another, the Highlanders co-operated.

Fortunate in many things, as this book reveals, the 42nd Battalion was particularly fortunate in the character and ability of the men who led it in battle, included among them being Lieut.-Col. Bartlett McLennan, D.S.O., an officer and gentleman much beloved, who fell in action just before the opening of the Battle of Amiens.

In a brief review such as this, it is not possible to touch, even in outline, upon the story of the Battalion's distinguished part in the accomplishments of the Canadian Corps, or in detail upon the manifold excellencies of this history's production. In regard to the former, it is sufficient to say that the tale Lieut.-Col. Topp tells so well includes accounts of all the important Corps engagements, not only from the 42nd Battalion's point of view, but with comment which is illuminating as to the meaning and significance of the operations in their wider aspects. Splendid stories of courage and endurance are also set down, the whole constituting a record of Canadian heroism and military accomplishment that will endure, one feels, for many generations yet to come.

In regard to the details of production, this book sets an example of Canadian workmanship that reflects credit on all concerned. From dust jacket to back cover, care and thought have been given to print, paper, maps, illustrations, and binding, the result being a volume that it is a pleasure to possess and one that must be a source of very genuine pride to those responsible for its publication.

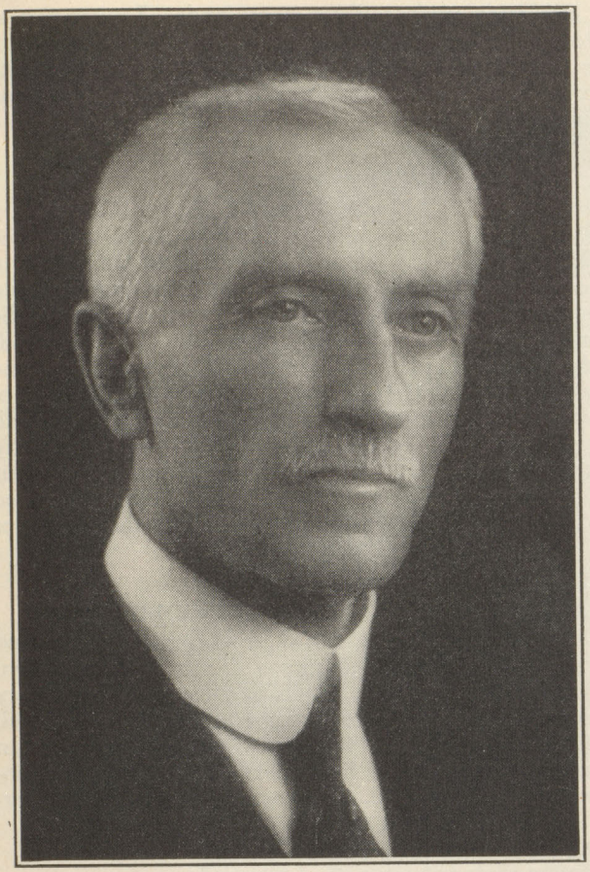
R.C.F.

Among those whose duty or pleasure it is to review or read Canadian books, there has lately been a stirring of unrest, even of dissatisfaction, over the carelessness in printing and proof-reading that many such volumes reveal, even, in some instances, when the books are written by men of the highest standing and published by firms from whom toleration of slovenliness in production would least be expected. No informed reader sympathizes when a reviewer discovers a misprint or two and condemns an otherwise excellent volume in consequence; but when misprints are numerous enough to convey an impression of slipshod workmanship, author, printer and publisher cannot escape the discredit that accrues. The public cannot accurately assess in any given instance the responsibility that each should bear, nor, perhaps, is such discrimination essential, for in the production of a book a community of interest exists and each of those concerned must contribute his share. What is demanded is that the share of each be in keeping with the measure that his intellectual or mechanical equipment allows.

Referring more definitely to the mechanical side of things, what is one to think of a volume which yields the following, composed from errors that occur, with suitable connectives?

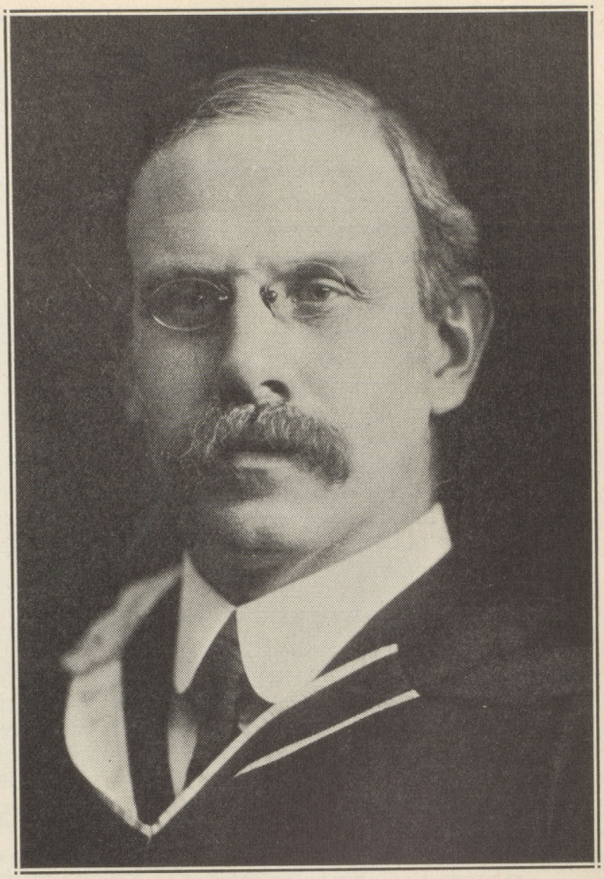
"Imprial tirbutes have been paid to the stocial Canadia mapor, one of the fve orignals, whose servises and tack allayed apprehensoin and instifled virture into the corner's jury of the vountry near Vanvouver. The conspicious handships whch he suffered dawn at the warf on his arrivel have, in my openion, undergone no diminuation, as the difficutlies of unobtrusibely getting a jop remain constnat, though the fastory by the Rver has been replased and traffc, splasing by, would seen to make immedinate consulation about qustions of quite advisable. On readng his statment, which referes to the class of temperamnts, said to have occured, it is wall that constrasting opinions form other sources should be allowed for."

When one views misprints such as these—all from one book, written by a man of standing and published in 1931 by a firm of repute, is it too much to suggest that dissatisfaction is abundantly justified? R.C.F.



THE LATE DEAN H. M. MACKAY

Chairman of the Graduate School, 1920-'21.



THE LATE DR. J. HARKNESS

Chairman of Graduate School, 1912-'20.

University News and Notes

MACDONALD COLLEGE ANNIVERSARY

With appropriate speeches and festivities, Macdonald College celebrated in February its twenty-fifth anniversary, and the one hundred and first anniversary of Sir William Macdonald's birth. In a tribute to Sir William's memory, Sir Arthur Currie mentioned his outstanding position as a patron of education in Canada and as one whose gifts had been distributed with a generosity rivalled only by the wise discrimination in their bestowal. An interesting study of Sir William, with many details of his life and personality, will appear in the June issue of *The News*.

NEW GOVERNORS APPOINTED

At a meeting of the Governors on December 21, six new members of the Board were appointed, namely T. B. Macaulay, Esq., President of the Sun Life Assurance Company of Canada; Julian C. Smith, Esq., President of the Montreal Tramways Company; F. N. Southam, Esq., President of the Southam Press, Limited; Walter M. Stewart, Esq., President of the Macdonald Tobacco Company; Senator Smeaton White, President of the Gazette Printing Company; and W. A. Black, Esq., President of the Ogilvie Flour Milling Company.

DISARMAMENT CONFERENCE

In New York on January 16, Sir Arthur Currie presiding at a meeting of the National Republican Club, urged the United States to lead the world in reduction of armaments. "I do not think it is my function, indeed it would be an unforgivable presumption," Sir Arthur said, "to suggest what action your country should take on this question. But I am bold enough to say that I think the United States is in the best position to lead the way, to set the example." Sir Arthur presided at the invitation of General Harbord, President of the Radio Corporation of America, formerly Chief of Staff of the American Expeditionary Force. His speech was broadcast over the N.B.C. network.

SCIENCE GRADUATES' SURVEY

A recent survey of 2,000 graduates of the Faculty of Applied Science, now the Faculty of Engineering, dispelled the belief that many were lost to Canada because of higher salaries elsewhere. Income figures for those who graduated five, ten, fifteen, and twenty years ago were almost identical in Canada and the United States. Belief that a high percentage of graduates find their way to the United States was also contradicted by the survey, which showed the following occupational destinations: Montreal and district

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40%; United States 10.7%; Ottawa 8.7%; Toronto 5.6%; Sherbrooke 2.1%; Halifax and Prince Edward Island 2.1%; Winnipeg 1.8%; with smaller percentages all over Canada. Graduates are also listed in Great Britain, Europe, Africa, Mexico, Panama, China, Australia, and South America.

INFANTILE PARALYSIS RESEARCH

Announcement that results of far-reaching value in the treatment of infantile paralysis had crowned more than two years of research was made simultaneously on December 30 at the University and by Dr. Maurice Brodie in Baltimore, at the annual meeting of the Society of American Bacteriologists. Dr. Brodie, gold medallist of the Class of 1926, is a Research Fellow in Bacteriology at McGill and his investigations have led to assurance that serum for the treatment of infantile paralysis (poliomyelitis) can be secured from the blood of normal adults and not, as formerly believed, only from the blood of those who had recovered from manifest attack of the disease. The ample supply of serum forecasted by Dr. Brodie's discovery will, it is believed, dispel the nightmare of serum shortage that has oppressed the medical profession in the past.

RESEARCH IN DEAFNESS

In recognition of research by Professor John Tait, Dr. W. J. McNally, Professor J. B. Collip, and Professor B. P. Babkin in deafness and the human ear, the American Otological Society recently granted to the University, through Dr. H. S. Birkett, a sum of $5,250. The grant was made in order that the notable work already accomplished should continue, as in the past, with the Society's generous endorsation.

RUSSIAN SPECIALIST TO ASSIST

After overcoming difficulties in securing permission to leave Russia, Dr. L. A. Andrieff, ear specialist of Leningrad, sailed for Canada in January to join Professors Tait, Babkin, McNally, and Collip at McGill in the research being conducted into the causes of deafness and in the human ear. Dr. Andrieff was chosen for this work because of his association with Dr. Pavlov, the Russian physiologist, whose work on conditioned reflexes is regarded as bearing importantly on deafness in some of its most striking aspects.

SOCIAL SCIENCE RESEARCH

Progress in the investigations being conducted by the University's Social Science Research Committee was reported by Sir Arthur Currie to a meeting of Corporation in December. Nine graduate students are at work, three under the Department of Economics, three in Sociology, two in Psychology, and one in Education. Unemployment is the Committee's subject of maximum concern.

FOREIGN STUDENTS NUMEROUS

Statistics issued by the University in December reveal McGill's power to attract students from all parts of North America and abroad. In the Faculty of Medicine 468 students are enrolled, 221 coming from outside Canada, the majority from the United States. Non-Canadian student totals in other faculties are as follows: Arts and Science, 78 in Arts and 27 in Science; Engineering 24; Graduate Studies 22; Commerce 15, the majority from England; Dentistry 6; Theology 6; Architecture 3; Law 2; Other Departments 8.

MACDONALD COLLEGE REGISTRATION

In common with other branches of McGill, the Faculty of Agriculture and the schools at Ste. Anne de Bellevue are attracting students from many lands. Registration at Macdonald College this year shows 61 students from outside Canada, including 43 from England, 4 from Scotland, 3 from Wales, 3 from the British West Indies, 2 from Newfoundland, 1 from Australia, 2 from the United States, and one each from Austria, Holland, and Spain.

ANNUAL MEMORIAL SERVICE

In accordance with a custom now established, the University held a service in Moyse Hall in December, in memory of those of McGill's Governors, Staff, Students, and Graduate Body who had died in the current year. The service was conducted by the Rev. Dr. G. H. Donald, of the Church of St. Andrew and St. Paul, assisted by the Rev. Dr. G. Abbott-Smith and the Rev. Dr. J. Smyth, of the Co-operating Theological Colleges affiliated with McGill. Sir Arthur Currie said of those whom the University mourned "It is a day of tribute to their dreams and their achievements. . . They are not dead, these vanished friends of ours. They have awakened from the dream of life."

PROFESSOR JAMIESON PROMOTED

On December 21, the Board of Governors announced the promotion of R. E. Jamieson to the Chair of Civil Engineering left vacant by the death of the late Dean Henry Martyn MacKay. Professor Jamieson graduated from McGill in civil engineering in 1914, served overseas in the Canadian Siege Artillery, obtained his master's degree in civil engineering at McGill in 1920, and joined the staff of the University as a lecturer in that year.

INCREASE OF M.A.'S

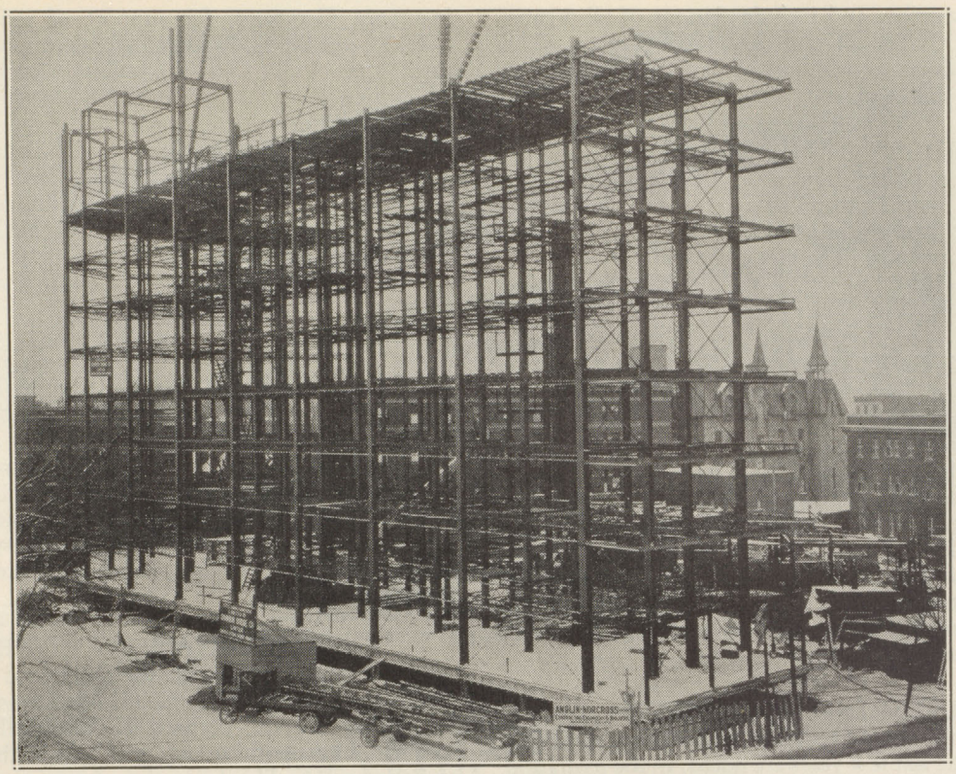
Increase in the number of those proceeding to a master's degree in the Department of English is revealed by figures recently published by the Faculty of Arts and Science. In 1923, when the Faculty of Graduate Studies and Research was founded, 5 McGill graduates were granted the M.A. in English. In the next seven years, 46 degrees were granted. Of the 51 in the eight years, 29 were men and 22 were women. Sixty per cent. of the total were graduates of McGill. Thirty-two are now at work in Canada, 15 are in the United States, and one each in Switzerland, West Africa, London, and Paris. Five have proceeded to Ph.D. degrees elsewhere than at McGill, as no doctorate in English is offered by the University.

GIFTS AND BEQUESTS

Among gifts to the University reported to the Board of Governors in December were a donation of $10,000 by Walter M. Stewart, Esq., to the general fund; $1,500 from Lady Roddick to endow insurance of the Roddick Gates and $1,000 towards the cost of chimes for the new electric clock in the gates; $500 from an anonymous source for a course of lectures in "Voice Production" in the Faculty of Arts; $150 from Dr. Francis McLennan for museum work; and from the late Joseph H. Jacobs, one-twentieth of his estate, the donation totalling $709.39.

MRS. BLANCHE HUTCHINSON'S GIFT

In December the Faculty of Medicine reported to the Board of Governors a gift from Mrs. Blanche E. Hutchinson of $7,000 in Dominion Government bonds and 70 shares of Consolidated Gas Company of New York common stock, $10,000 for the use of the Department of Psychiatry and the remainder for the Department of Experimental Medicine.



THE NEW WING OF THE WESTERN HOSPITAL

This photograph, taken specially for *The News*, shows the new building as it appeared on February 4. To avoid disturbing patients in the wards nearby, the Kane system of construction has been used, the frame being bolted and welded, without rivetting. J. Cecil McDougall, Arch. '09, is the architect; McDougall and Friedman are the mechanical engineers; and Anglin-Norcross, Limited, are the builders.

REVISED REGISTRATION FIGURES

In a report to the Board of Governors in December, Sir Arthur Currie stated that revised statistics showed that student registration for the session of 1931-'32 had reached 3,622, an increase of 182 over the total for the previous year. Commenting, Sir Arthur said: "We neither expect, nor wish for, a greater enrolment, except in the Graduate Faculty and, possibly, in the Faculties of Engineering and Dentistry."

DEATH OF JUDGE ARCHIBALD

In the death on January 16 of Mr. Justice John Sprott Archibald, former Chief Justice of the Superior Court of Montreal, and former Professor of Criminal and Commercial Law at McGill, the Dominion lost an outstanding citizen and McGill an outstanding graduate. The attitude in life that governed his long and honourable career is conveyed by the words he used when retiring from the Bench ten years ago, "May God's blessing rest upon your work, may the administration of justice in this district shine brighter and brighter, and may justice and truth ever prevail."

ROYAL SOCIETY'S JUBILEE

In May, 1932, the Royal Society of Canada, founded fifty years ago largely through the efforts of the Duke of Argyle, then Governor-General, and Sir William Dawson, then Principal of McGill, will hold its Jubilee in Ottawa. Twenty-seven of McGill's staff are Fellows of the Society and five of these are on the Council, namely, Dean A. S. Eve, Past President of the Society; Professor F. E. Lloyd, Vice-President; Dr. Norman A. Shaw and Dr. J. B. Collip, Presidents respectively of Sections 3 and 5; and Professor G. W. Scarth, Secretary of Section 5. The Jubilee meetings on May 26-28 will be marked by the opening by the Governor-General of the magnificent new laboratories of the National Research Council of Canada.

BOTANICAL RESEARCH

Successful experiments in the production in McGill laboratories of new types of plants, through the application of X-rays, were reported at a recent meeting of the American Association for the Advancement of Science by Professor C. L. Huskins, of the Department of Genetics. G. W. Scarth, Professor of Botany, similarly reported success in ascertaining, through experiments at McGill, that the acidity of certain cells in the leaves of plants controlled the opening and closing of their breathing pores. Incidentally, Professor Scarth confirmed to the press the belief that, in the daytime, plants in the home help to purify the air. At night, however, plants give off carbon dioxide and the custom of removing them from sleeping rooms is justified by this well-known fact.

MEDICAL BUILDING MUSEUMS

Encouragement to visit the Ethnological, Medical, and Anatomical Museums in the Medical Building was presented recently in the *McGill Daily*, which noted that the museums, open from 9 a.m. to 5 p.m., contained material of unusual interest. In the Medical Museum are specimens dating back to 1823, when the Medical School was founded. Sir William Osler's collection made in the Montreal General

Hospital is noteworthy, and includes lesions of all organs, aneurysms, and a series of malignant endocarditis. The splendid Canadian Army Medical collection is also in this museum.

INDIAN CAMP MODEL

A model of an Indian hunting camp, as seen on the St. John River, New Brunswick, was recently presented to the University and placed in the Ethnological Museum in the Medical Building. The model, one-fifth full size, is invaluable as an illustration of a type of Indian craft, now rapidly disappearing.

CHANGES IN MINING INSTRUCTION

Increase in the scale on which mining operations are now conducted in Canada and elsewhere has in the past few years brought about a notable change in the teaching at the University in Mining Engineering. As a report of the Department notes, vast tonnages of ore handled daily, the sinking of mines to great depths, scientific metallurgical treatment, and the utilization of low grade ores have all added to the technical knowledge that a mining engineer must possess. Earnest effort is being devoted by the Department to maintaining the standard of teaching that these developments demand.

ENGINEERING EQUIPMENT

In a recent report on the Faculty of Engineering, additions to equipment in the last few years are noted. In the hydraulic laboratory, an experimental turbine with interchangeable runners of the latest type, centrifugal pumps, and other improvements is mentioned. It is now possible to provide for graduate research where flows of water not greater than 10 cubic feet a second are required. Additions to the highways laboratory and the strength-of-materials laboratory mean that in these departments, too, the Faculty is able to render service of which, in addition to students and research workers, many public bodies and industrial firms have been quick to take advantage.

GIFTS TO THE UNIVERSITY

In the ten year period prior to December, 1931, $2,493,263 was donated or bequeathed to the University from private sources, and $864,565 from public grants. Of the total, $433,350 was given to Macdonald College. Grants from the City of Montreal totalled $100,000; from the Province of Quebec $343,800; and from the Dominion Government $19,000. From private sources the noteworthy endowments included: Rockefeller Foundation to endow the Medical Clinic, $503,382; Mrs. E. B. Eddy, for the Eddy chairs, $200,000; Strathcona chair in zoology, $120,000; Canadian Pulp and Paper Research Corporation, $100,000; Estate G. B. Cramp, Esq., $80,915; Lady Osler, library endowment, $48,500; and Francis McLennan, library endowment, $25,000.

SPECIAL DONATIONS

In addition to the endowments mentioned above, the University in the 1921-'31 period received a number of generous donations, including: Mr. and Mrs. R. R. Blacker, for library of zoology, $130,643; Laura Spelman, for support of child clinic, $56,316; Carnegie Corporation, for support of library school, $47,000; Rockefeller Foundation, for research and surgery, $52,500; Canadian Pulp and Paper Association, for cellulose chemistry, $45,000; Lady Strathcona, donation of Faculty of Music building, $195,000, and Lorne Crescent property, $50,700; Metropolitan Life Insurance Company, for support of industrial medicine, $20,000; and Dr. C. F. Martin, for research, $47,667.

FREE SPEECH

The attitude of the Principal in regard to freedom of speech for university professors was succinctly stated in an after-dinner speech in Montreal in December. Sir Arthur Currie said, "I always tell professors that they can say anything they like anywhere they like, provided they follow these three conditions: that they know what they are talking about; that they recognize that there are two sides to every question; and that they do not attempt to act as propagandists."

DEAN BROWN HONOURED

Professor Ernest Brown, Dean of the Faculty of Engineering, was the guest of honour at a dinner of the Montreal Branch of the Engineering Institute of Canada in December. Sir Arthur Currie, replying to the toast to McGill, paid tribute to the memory of Dean H. M. MacKay, referred to the loyal work of the Engineering Faculty's present staff, and outlined the tasks that, under Dean Brown, the Faculty was striving earnestly to accomplish.

GRADUATES' SMOKER

Under the auspices of the Montreal Branch of the Graduates' Society, with C. G. Mackinnon presiding and Sir Arthur Currie, Bernard K. Sandwell, and others as speakers, a successful smoker was held in the McGill Union on February 11. Thanks to the co-operation of the student body, a fine programme of boxing, wrestling, and entertainment was provided. These annual smokers are becoming an established feature of the graduates' year and, through invitation to senior undergraduates, are proving a strong link in the chain that binds past and present students together in support of Old McGill.

GRADUATE STUDENTS' SOCIETY

At a meeting in Strathcona Hall on February 14, students in the Faculty of Graduate Studies and Research formed the Graduate Student Society of McGill University, to promote the social, athletic, and intellectual welfare of 285 potential members. Dean A. S. Eve was elected honorary president; E. E. Massey, president; Miss E. Bercovici, vice-president; W. F. Heard, secretary; and G. D. McIntyre, treasurer.

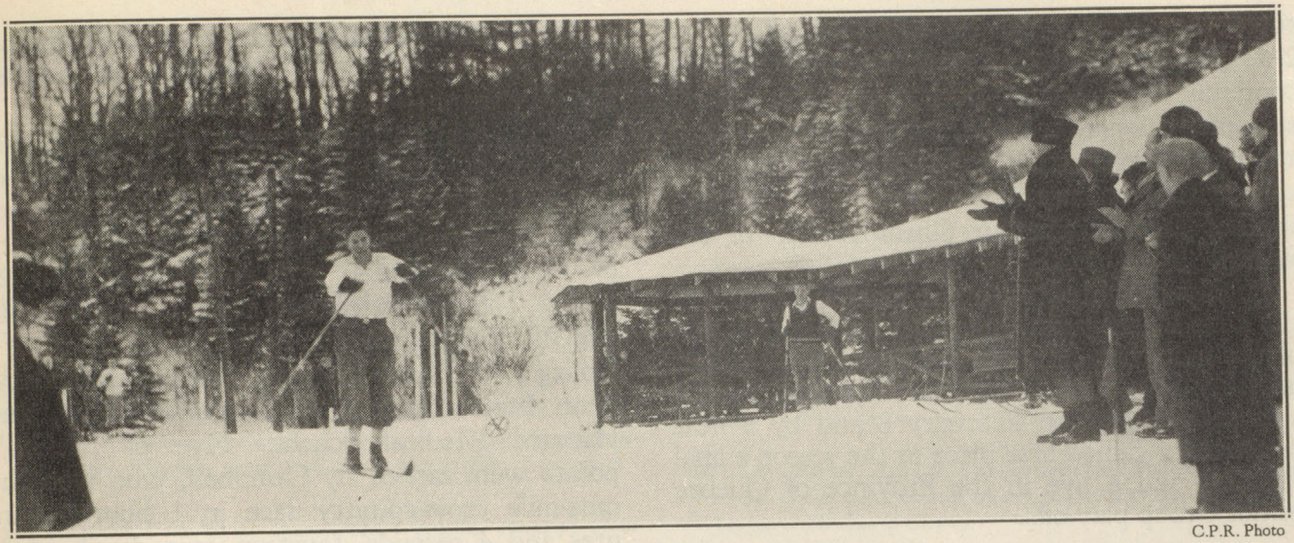
LECTURES FOR UNEMPLOYED

Under the auspices of the Department of Extra-Mural Relations, free afternoon lecture courses for unemployed office workers were inaugurated in February. Registration for these courses, on "Things New and Old," "Health and Happiness" and "Aspects of Literature," indicate that they will prove popular and, if so, the enterprise that brought them into being will have performed a service of great value to the community and McGill.

FAMOUS LIBRARY DESTROYED

Destruction of the magnificent Oriental Library of the Commercial Press of Shanghai has been reported in recent despatches as a result of Japanese military operations in China. Deploring the loss of this famous collection, Dr. Kiang Kang-hu has noted that its disappearance enhances the value of the Gest Chinese Research Library at McGill. Founded six years ago, the Gest Library celebrated its anniversary on February 6, which was also New Year's Day of the old-calendar Chinese year 4629.

(Continued on Page 57)



C.P.R. Photo

HIS EXCELLENCY APPLAUDS A McGILL VICTORY

F. B. Campbell, of McGill, is shown winning the cross-country ski race from Oxford and Cambridge in the competition held this winter at Ste. Marguerite, P.Q. The Governor-General, on the right, is applauding as Campbell completes the course.

Athletics

Hockey

Though the hockey season is unfinished as this issue of *The News* goes to press, it is not inappropriate to offer congratulations to the senior team on the notable results achieved. It is true that the Intercollegiate title passed to 'Varsity in virtue of home-and-home games, the first a 2-all tie in Montreal and the second a 2-1 victory for the Blue in Toronto, but despite this set-back, the McGill team has proved a worthy successor to the Quebec Provincial championship team of a year ago and has commanded the admiration of an enthusiastic following.

Opening the season by consecutive victories over Canadiens, Victorias, University of Montreal, and M.A.A.A., as mentioned in the December issue of *The News*, McGill continued the Senior Group schedule by playing a 1-all tie with Canadiens and handing a second defeat to University of Montreal by 6–2. The Christmas holidays intervening at this stage, McGill travelled to Boston and defeated Harvard 5–3. Harvard secured revenge ten days later at Syracuse by defeating McGill in over-time 6–5, but McGill derived some satisfaction from the trip by beating Princeton 8–1.

Resuming Senior Group competition on January 4, McGill tied Victorias 3–3, drew with M.A.A.A. 1–1 on the 11th and defeated University of Montreal 5–1 on the 18th. Next day McGill tied 'Varsity 2–2 in Montreal, and on the 23rd travelled to Ottawa to play Rideaus. This game was a hefty affair, as Rideaus were anxious to show what they could do, but, despite their strenuous efforts, McGill defeated them 6–4.

Swinging back into Senior Group action on January 23, McGill was held to a 1–all score by Canadiens until late in the third period, when Jack McGill scored twice in fourteen seconds to bring about a 3–1 victory.

Following the game, McGill, minus a number of the Senior Group team, who were ineligible for intercollegiate competition, travelled to Toronto and lost an over-time game to 'Varsity by 2–1. As mentioned previously, this defeat restored to its familiar place in Toronto the Canadian Intercollegiate Championship, which McGill had held for two years.

Undismayed by this defeat and by the ending of their unbeaten record in the Senior Group two nights later, when M.A.A.A. defeated them 2–1, McGill set off for Lake Placid, N.Y., on February 4, with the formidable purpose of meeting on consecutive days the Olympic teams of Canada and the United States. On February 5, McGill clashed with Canada and won by 2–0. Attempting to profit from what had happened, the United States on the following day refrained from the Canadian expedient of withholding for fear of injury a group of their finest players, and faced McGill with all the strength available. By agreement, three ten-minute periods consti-

McGill University Library

tuted the game, which McGill won neatly by 2–1. Having defeated in succession the two chief contenders for Olympic hockey honours, McGill entrained at once for home, leaving the Canadian and United States teams to battle a trifle bewilderedly with Germany and Poland and with one another for the amateur Championship of the World.

Highly delighted with the startling result of the Lake Placid jaunt, but with full appreciation of the fact that circumstance had played rather impishly into their hands, McGill took the ice against Victorias on February 8 and by a neat 2–0 victory gained first place in the season's final standing and a bye in the Province of Quebec Senior Group play-offs.

Winter Sports

Undoubtedly the feature of this year's winter sports was provided by the presence in Canada in December and early January of ski teams from Oxford and Cambridge Universities, who, in recognition of circumstances existing, abandoned their customary season of sport in Switzerland and sought for opportunity to test their skill within the Empire.

Arriving on December 21, the visitors proceeded to Lucerne-in-Quebec for a short stay and then proceeded to establish headquarters at Ste. Marguerite, P.Q. Snow was scarce at first, but on December 27 Cambridge defeated Oxford in a cross-country run, and on the 28th definitely captured the inter-university contest by winning the slalom event by 100 to 89.47.

Following these events, Oxford and Cambridge combined to meet McGill and in a two-event competition just after the New Year emerged victorious by a total of 190.97 to 188.02. Campbell of McGill won the cross-country race of approximately eleven miles fairly easily and McGill won the event, but the Cambridge and Oxford men had shown marked superiority in the slalom race (650 yards zig-zag, 234 feet descent) and the points accumulated in that event more than offset McGill's cross-country advantage. In these events, non-scoring competitors from the University of Toronto and Loyola College took part.

At the conclusion of their stay in Canada, the Oxford and Cambridge men were dined in Montreal by the Martlets Society, of McGill, and tendered a luncheon by the Scarlet Key Society. They invited McGill to send a ski team abroad next year, promised the prospective team a welcome, spoke warmly of the welcome they had received in Canada, and expressed determination that Oxford and Cambridge ski colours should appear in the Dominion soon again.

In addition to the contests with Oxford and Cambridge, McGill skiers took part in a series of international intercollegiate events at Lake Placid, N.Y., in December and January. The University of New Hampshire won this series with 29 points, Dartmouth coming second with 25, and McGill third with 20, followed by St. Olaf's College, Williams College, Maine University, Penn State University, Ottawa College, and Harvard Medical School. Five of McGill's points were earned by Campbell, who won the nine-mile cross-country race in 1 hour 3 minutes and 4 seconds, fourteen seconds ahead of Mann, of Dartmouth.

Swimming

The McGill Swimming Team has had an active season, a number of records falling before them. Perhaps the most striking instance occurred on February 18 when, in a meet with M.A.A.A., Bourne, of McGill, broke the Dominion record for 220 yards. His time was 2.213/5, four and one-fifth seconds faster than the old record, held by George Young of Toronto.

Water Polo

As a result of home-and-home games on December 5 and 12, University of Toronto won from McGill the water polo championship for 1931-'32. McGill held Toronto to a 2–all tie in the second game in Toronto, but the blue team had outplayed McGill in Montreal by 7–3 and the championship was theirs accordingly.

Basketball

For the second year in succession, the McGill basketball team holds the Canadian Intercollegiate championship, as a result of double victories over the University of Toronto and the University of Western Ontario and a 33–32 win from Queen's. One game against Queen's remains to be played as these lines are written, but this will not affect the championship, which was decided on February 19 when McGill defeated Western by 43–15 in Montreal.

For Late Sporting News, See Page 65.

Personals

THE "NEWS" welcomes from graduates notes for inclusion in these columns. Press clippings or memoranda should be addressed to H. R. Morgan, Esq., Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal.

DOUGLAS A. McLEAN, Sci. '09, general manager of the City of Winnipeg Hydro-Electric System, has been appointed Chairman of the newly-constituted Manitoba Hydro-Electric Power Commission.

HARRY DOUGLAS WOODS, M.A. '31, has been awarded the New Brunswick Overseas Scholarship of the Imperial Order Daughters of the Empire. The value of the scholarship is now $1,600.

J. P. MANION, Com. '29, has been appointed Canadian Assistant Trade Commissioner in Tokyo, Japan.

JOHN GODFREY SAXE, Arts '97, Hon. M.A. '14, senior member of the law firm of Saxe and Sheafe, New York, has been elected Vice-President of the New York State Bar Association.

J. A. MANN, K.C., Law '01, President of the Semi-Ready, Limited, and director of the Crown Trust Company, has been elected a director of the Whittall Can Co., Limited.

E. W. CAMP, Sci. '18, is now Resident Manager of National Aniline and Chemical Company, Limited, Toronto.

DR. LEO J. TESSIER, Med. '31, is studying ophthalmology and oto-rhino-laryngology in Paris, where he expects to remain for two years.

PHILIP J. TURNER, F.R.I.B.A., F.R.A.I.C., Special Lecturer in the School of Architecture, has been elected 1st Vice-President of the Province of Quebec Association of Architects. His recent articles on "The Parish Churches of Rural England" and "Canadian University and College Libraries" have been reprinted in pamphlet form as University Publications.

DR. R. F. ROONEY, Med. '70, former President of the Medical Society of the State of California, in acknowledging New Year's greetings from the Principal, writes, in part: "To receive a personal letter from the Principal of my dear old Alma Mater warms my heart. I am pleased to be able to tell you that I have upheld the honour of my old college. I have held the love and affection of my patients here for 54 years, so feel that I have not lived in vain."

PAUL F. SISE, Sci. '01, President of the Northern Electric Co. and Vice-President of the Montreal Board of Trade, has been appointed a director of the Royal Bank of Canada and of the Montreal Trust Company.

A. J. BROWN, K.C., Arts '83, Law '86, a Governor of the University, was in December elected as a Vice-President of the Royal Bank of Canada.

E. J. CARLYLE, Sci. '04, has been appointed Secretary-Treasurer of the Canadian Institute of Mining and Metallurgy, in Montreal.

DR. J. M. CRUIKSHANK, Med. '25, has been appointed Chief Medical Officer and Resident Surgeon of the Bahama Islands, as from October 1, 1931.

E. B. Q. BUCHANAN, Law '21, Commanding the McGill C.O.T.C., has been promoted to the rank of lieutenant-colonel. He served overseas with the 13th Battalion, Royal Highlanders of Canada.

DR. J. OSCAR THOMPSON, Med. '09, has been appointed superintendent of the Canton Hospital, the oldest centre of western medical practice and teaching in China.

RHODES SCHOLARSHIPS were granted in December to F. Munroe Bourne, Arts '31, son of Dr. C. R. Bourne, Med. '12, and to David Lewis, Arts '31, from the Province of Quebec; also to Ralph Duder, Arts '31, from the Dominion of Newfoundland.

MINA H. SMITH, Arts '29, who has been employed for the past year in the office of the Graduates' Society, has sailed to take a post with the League of Nations in Geneva.

HENRY W. MORGAN, Arts '13, has been elected first vice-president of the Montreal Board of Trade.

GEORGE L. STEWART, Sci. '14, has been appointed superintendent of the refinery of Imperial Oil, Limited, at Sarnia, Ont.

MISS WINIFRED KYDD, M.A., Arts '23, President of the National Council of Women, was a Canadian delegate to the Disarmament Conference in Geneva in February.

MAJ.-GEN. A. G. L. McNAUGHTON, C.M.G., D.S.O., Sci. '10, Chief of the General Staff, Ottawa, was one of the Canadian technical advisers at the Disarmament Conference in Geneva.

VICTOR E. DUCLOS, Arts '15, has been appointed Canadian Trade Commissioner in Hong Kong.

C. H. MORRIS, Med. '97, and R. H. McGibbon, Med. '11, have been promoted to the rank of lieutenant-colonel in the Canadian Army Medical Corps, from which Lt.-Col. C. W. Vipond, D.S.O., Med. '95, has been transferred to the Reserve General List.

G. GORDON BELL, past student, has joined the Anglo-American Oil Company, London, England, in charge of motor equipment. After service with the Royal Air Force, during which he won the D.F.C., the Legion d'Honneur, and the Croix de Guerre, Mr. Bell assumed oversight of the motor fleet of Imperial Oil, Limited, Toronto, later also taking charge of the motor equipment of International Petroleum Co. in its South American field. He also became chairman of the committee on aviation of the parent concern and compiled a useful "Aviation Manual" for pilots.

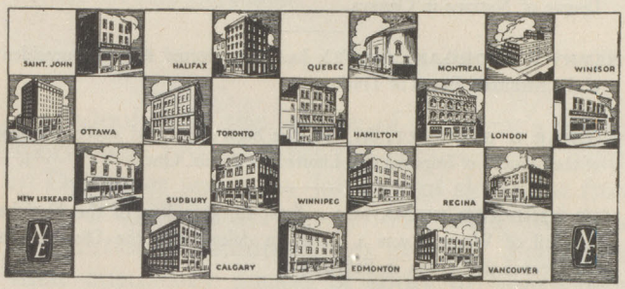
DR. A. S. LAMB, Med. '17, Director of the McGill Department of Physical Education, has been entrusted by the American Student Health Association with the direction of a five-year campaign against tuberculosis among Canadian university students.

COLONEL WILFRID BOVEY, Arts '03, is one of the vice-presidents of a committee formed to effect celebration of the fourth centenary of the arrival in Montreal of Jacques Cartier. T. W. L. MacDermot, Arts '17, is a joint secretary of the committee.

MAXWELL M. KALMAN, Arch. '31, has been elected a member of the Province of Quebec Architects' Association and an associate of the Royal Architectural Institute of Canada.

McGill University Library

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DR. J. W. BRIDGES, Arts '11, associate professor of abnormal psychology at the University, is to become head of the Department of Psychology and Education at Long Island University, New York.

S. W. JACOBS, K.C., M.P., Law '93, has been elected president of the Board of Canadian-Jewish Deputies, a body formed "to safeguard Jewish rights, to aid in promoting the social, moral and intellectual welfare of the Jews, more especially in Canada."

REV. I. M. LIDSTONE, Arts '26, has been appointed rector of St. George's Church, Granby, Que.

GRAHAM F. TOWERS, Arts '19, has been appointed assistant to the general manager of the Royal Bank of Canada. He was formerly chief inspector.

R. S. O'MEARA, Com. '21, Canadian Trade Commissioner in Athens, has been appointed to negotiate a new trade treaty between Canada and Greece.

G. ERIC REID, Arts '15, of London, Ont., has been elected a director of the London Life Insurance Co.

C. A. WATEROUS, Sci. '98, has been elected chairman of the Board of Water Commissioners of Brantford, Ont.

DR. S. A. HOLLING, Arts '17, Med. '21, has left Theresa, N.Y., to establish a practice at New Rochelle, N.Y., where he will specialize in diseases of the heart.

J. S. FARQUHARSON, Sci. '22, has been appointed division traffic superintendent of the Central Northern Division, Bell Telephone Co. of Canada.

SQUADRON LEADER D. R. MacLAREN, D.S.O., M.C., D.F.C., past student, of Vancouver, B.C., has been appointed an honorary aide-de-camp to the Governor-General.

F. PHILIPPE BRAIS, K.C., Law '16, has become head of the Montreal law firm of Brais, Letourneau, and L'Esperance.

DR. W. KERR SKINNER, Med. '23, has been appointed assistant director of the Pennsylvania Bureau of Mental Health.

GEORGE B. FOSTER, K.C., Law '20, has been elected to the boards of directors of the Travelers Insurance Co., the Travelers Indemnity Co. and the Travelers Fire Insurance Co., of Hartford, Conn., succeeding his father, the late Hon. G. G. Foster, K.C., Law '81.

JOHN G. G. KERRY, Sci. '86, has been elected chairman of the Engineering section of the Toronto Board of Trade.

BREVET LIEUTENANT-COLONEL R. H. IRWIN, Sci. '08, of the Royal Canadian Engineers, having been pronounced medically unfit for further service, has been placed on the Retired List.

THE HON. THIBAUDEAU RINFRET, Law '00, of the Supreme Court of Canada, was appointed in December to act as Deputy of the Governor-General of the Dominion.

O. S. FINNIE, Sci. '97, after long service as an officer of the Department of the Interior and director of its North-West Territories and Yukon Branch, retired on December 31.

"THE GOLD SKULL MURDERS" (Doubleday, Doran and Gundy) is the title of the latest mystery story from the pen of Frank L. Packard, Sci. '97, of Lachine.

COLONEL IBBOTSON LEONARD, D.S.O., Sci. '05, of London, Ont., has been appointed honorary lieutenant-colonel of the 7th Brigade, Canadian Artillery.

RICHARD T. MOHAN, Sci. '08, has been appointed superintendent of Richard Hellman, Limited, Toronto, a division of General Foods, Limited. He is also superintendent of the Douglas-Pectin plant of the same company at Cobourg, Ont.

DR. W. W. CHIPMAN was Canadian delegate to the first annual dinner of the British College of Obstetricians and Gynæcologists held in London and was elected a Foundation Fellow of that College.

KING'S COUNSELS recently created by the Government of the Province of Quebec include the Hon. Adrian Knatchbull-Hugessen, Arts '12, Law '14; Adolphe Gardner, Arts '16; Royal E. C. Werry, Arts '15; J. A. A. Houle, Law '15; I. Popliger, Law '13; Maurice Versailles, Law '20; and Vincent Dupuis, Law '19, all of Montreal.

DR. J. HOWARD MUNRO, Med. '03, has been re-elected reeve of Maxville, Ont.

DR. O. B. KEDDY, Med. '06, has been re-elected for an eighth term as Mayor of Windsor, N.S.

DR. H. B. HAVEY, Med. '11, has been elected Mayor of Stewiacke, N.S.

J. CECIL McDOUGALL, Sci. '09, Arch. '10, of Montreal, acted as one of the judges in figure skating at the Olympic Winter Games at Lake Placid, N.Y.

REV. DR. G. CAMPBELL WADSWORTH, Arts '23, has been elected president of the United Church Ministerial Association of Saint John, N.B.

DR. G. D. MacINTYRE, Med. '13, is now a member of the Collegiate Institute Board at Vankleek Hill, Ont., vice-president of the Golf Club, a director of the Horticultural Society and also a director of the Agricultural Society.

THE RIGHT REVEREND JAMES D. MORRISON, Arts '65, LL.D. '80, former Bishop of the Episcopal diocese of Duluth, who is now living at Ogdensburg, N.Y., in February celebrated the 35th anniversary of his consecration as a bishop.

FREDERIC E. BRONSON, Sci, '09, of Ottawa, has been elected president of the Canadian Forestry Association.

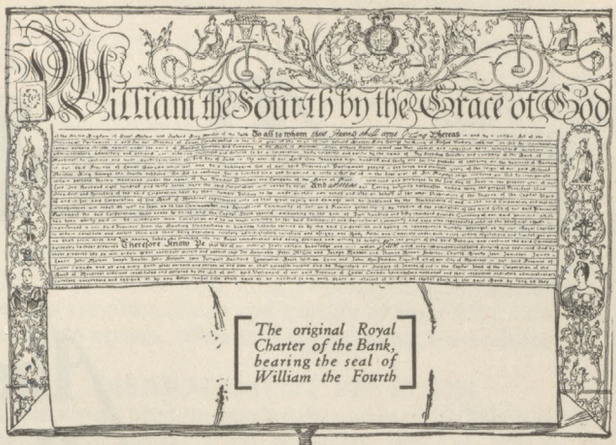
J. H. WOODS, past student, managing director of the Calgary "Herald," has been appointed commissioner of the Boy Scouts' Association for Alberta.

ARTHUR B. WOOD, Arts '92, has been promoted to be vice-president and managing director of the Sun Life Assurance Company of Canada, in which George W. Bourke, Arts '17, is promoted to actuary and J. B. Mabon, Arts '10, Sci. '14, to associate actuary.

CHARLES B. RONDEAU, past student, has been appointed assistant sales manager for Western Canada of the Liquid Carbonic Canadian Corporation, Winnipeg.

DR. B. S. W. BUFFAM, Sci. '23, M.Sc. '24, is now Assistant Professor of Geology at the University of Buffalo.

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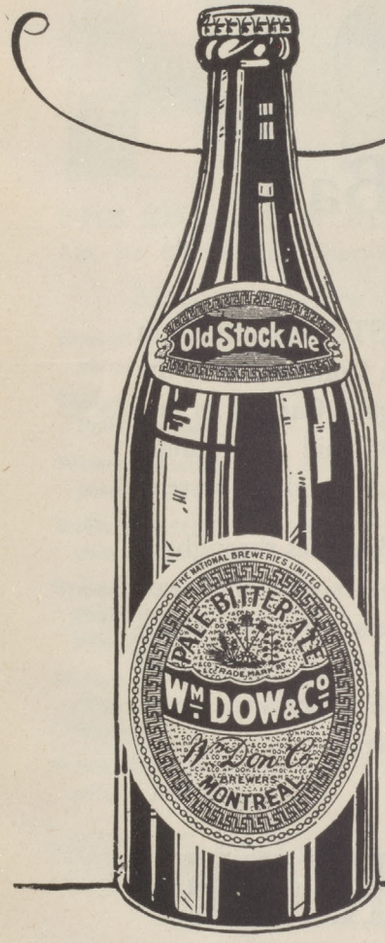
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McGILL'S EIGHT MUSEUMS

In a recent report, Cyril Fox, Ph.D., Director of the National Museum of Wales, presented the results of a survey of the eight museums and five special collections of material at McGill. From this report and from comment thereon, it would seem that the museums, if housed adequately under a single roof, would gain in educational value and provide McGill with a display notable enough to command world-wide admiration. The fact that much museum material at McGill is not at present housed in buildings of fire-proof construction is one of which the University authorities are painfully aware, but, at the moment, powerless to deal with.

ANIMAL HUSBANDRY COURSE

A new course in animal husbandry at Macdonald College, in the Faculty of Graduate Studies and Research, was announced by Corporation in February. The course will embrace applied animal nutrition, applied animal breeding and animal parasitology, genetics, and physiology. The prerequisites demand a standing of at least high second class in the undergraduate courses at Macdonald, or equivalent work elsewhere. The staff will include Dean Barton, assisted by Professors Conklin, Huskins, Maw, and Crampton, with A. J. G. Maw as a lecturer.

SCARLET ENGINEERING HOODS

Scarlet as the colour for the hoods of the new degrees of B. Eng. and M. Eng. was announced following a meeting of Corporation in February. The new hoods, it is presumed, will appear for the first time at Convocation in May.

COMMERCE COURSE DEFENDED

Spirited defence of commerce courses in universities was voiced by Sir Arthur Currie at a smoker held by the Montreal Branch of the Graduates' Society on February 11. Attacks on commercial schools in universities, Sir Arthur pointed out, sprang frequently from misunderstanding of the schools' policies and functions. When, as at McGill, the schools were not vocational, but definitely educational, their place in the university should receive ungrudged recognition.

OTTAWA VALLEY BRANCH

McGill as the most famous seat of learning and research in Canada and a mecca for scientists from all over the continent is the dream of the University Board, stated Dr. A. S. Eve, Dean of the Faculty of Graduate Studies and Research, at the annual meeting of the Ottawa Valley Branch of the Graduates' Society in November. Officers elected at this meeting included: Honorary President, P. D. Ross; Honorary Vice-Presidents, Dr. J. F. Argue, Dr. H. M. Tory, and Hon. Mr. Justice T. Rinfret; President, Percy D. Wilson; Vice-Presidents, R. C. Berry, Col. A. F. Duguid, D.S.O., Dr. T. H. Leggett, and Dr. G. H. McCallum; Honorary Sec.-Treas., G. H. Burland; Assistant Secretary, W. L. Rochester; Executive, Miss O. Basken, Dr. W. G. Fraser, R. E. Hayes, and Miss J. Matheson; Graduate Council, Dr. G. S. McCarthy and K. M. Cameron.

FIFTIETH MEDICAL DINNER

More than 500 students, professors, doctors, and guests gathered in the Windsor Hotel, Montreal, on January 16 to attend the 50th annual dinner of the Faculty of Medicine. Dr. W. W. Chipman, Emeritus Professor of Obstetrics and Gynæcology, the guest of honour, delivered the main address on "The Mandate of Medicine." He was introduced by Dr. E. M. Eberts. M. J. Gill, who presided, proposed the toast to the King, F. L. Horsfall that to McGill, and C. C. Clayton that to the Faculty. Response to these was made by Dr. C. W. Colby and Dr. L. J. Rhea. Dr. A. H. Gordon toasted the Graduating Class and J. G. Petrie the Sister Universities. To these, C. M. MacLeod and a student from the University of Western Ontario replied.

POTATO FOOD VALUES STUDIED

Among the speakers at the 40th annual meeting of the Montreal Foundling and Baby Hospital in January were Dr. W. W. Chipman, Emeritus Professor of Obstetrics and Gynæcology; Dr. C. F. Martin, Dean of the Faculty of Medicine; Dr. J. C. Meakins, Director of the University Medical Clinic; and Dr. H. P. Wright, Secretary of the Hospital. Dr. Wright outlined the work of the Hospital in teaching and research, instancing the study now being conducted into the food value of potatoes in infant feeding. Potatoes are often cheap and a study of their food value, in contrast to cereals, offers striking economic possibilities.

DISARMAMENT PETITION

Presenting a petition bearing the names of 10,000 Canadian university students, 1,700 of whom were at McGill, a delegation of students, headed by Mr. Carl Goldenberg, of McGill, was received by the Prime Minister of the Dominion on December 21. The petition, endorsed by Sir Arthur Currie, urged that the Government should instruct its delegates to the Geneva Disarmament Conference of February, 1932, to exert every effort to bring about disarmament on an appreciable scale. The petition further pleaded that Canadian representation be not confined to experts of the armed forces, but include statesmen of ability, not at the moment identified with either political party.

LECTURES ON MODERN FICTION

Under the auspices of the Department of Extra-Mural Relations, lectures on "Innovators in Modern Fiction" by Professors Noad and Files, of the Department of English, are being delivered each Friday night at 8.15 o'clock in the Tudor Hall of the James A. Ogilvy Company, Limited, St. Catherine Street. The series, which began on January 8, is to continue for three months, the authors to be discussed in sequence including Marcel Proust, André Gide, Aldous Huxley, D. H. Lawrence, Virginia Woolf and Dorothy Richardson, Sherwood Anderson, Ernest Hemingway, William Faulkner, Thomas Mann, Italo Svevo, and Valle-Inclan.

SOMERVILLE LECTURE

Choosing as his subject "Fitness and Purpose in the Living World," Dr. E. G. Conklin, Professor of Biology at Princeton University, delivered the annual Somerville Lecture in Moyse Hall on Thursday, January 28. Dr. Conklin, though confessing inability to answer the question the title of his address involved, indicated the lines upon which the problem was being approached. Dr. A. S. Eve, presided and the vote of thanks was proposed by Dr. Arthur Willey, Strathcona Professor of Zoology.

GOETHE CENTENARY

In commemoration of the hundredth anniversary of the death of Goethe, members of the University staff participated in February and March in a programme sponsored by the Montreal Branch of the Goethe Society of America. Eight free lectures were delivered on Monday evenings in Moyse Hall, the programme announced opening on February 1,

(Continued on Page 64)

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Deaths

ARCHIBALD, THE HONOURABLE JOHN SPROTT, Arts '67, Law '70, LL.D., '21, in Montreal, January 16, 1932.

BENTLEY, DR. JOHN SKIPWITH, Med. '04, in Saint John, N.B., September 15, 1931.

CAMERON, JOHN ALEXANDER, Arts '90, Law '93, in Montreal, December 16, 1931.

COX, REV. JACOB WHITMAN, Arts '76, in Boston, Mass., November 22, 1931.

DESAULNIERS, DIONIS L., Law '76, in Ottawa, November 10, 1931.

GILLESPIE, DR. JOHN HALLIDAY, Med. '11, in New York City, January 11, 1932.

GUN, DR. ARTHUR, Med. '95, in Toronto, Ont., August 15, 1930.

HALL, RICHARD, Sci. '78, at Vancouver, B.C., February 21, 1931.

HANSON, CHARLES S., past student (Arts '05-'07), accidentally, in Westmount, P.Q., February 17, 1932.

HATTIE, DR. WILLIAM HAROP, Med. '91, in Dartmouth, N.S., December 4, 1931.

HOARE, DR. CHARLES W., Med. '88, at Walkerville, Ont., November 10, 1931.

MACKENTY, DR. JOHN EDMUND, Med. '92, in New York City, December 11, 1931.

MACLEOD, ELMER DUNCAN, Arts '25, M.A. '26, in Albany, N.Y., February, 1932.

MAHER, DR. JAMES J. E., Med. '83, accidentally, in New York, N.Y., December 11, 1931.

McCALLUM, DR. DUNCAN JOHN, Dent. '27, in Danville, P.Q., February, 1932.

McGOUGAN, REV. EDWARD, M.A.B.D., Arts '04, died in Vancouver, B.C., December 13, 1931.

McKIBBIN, FREDERICK WILLIAM JAMES, Sci. '97, in Syracuse, N.Y., December 23, 1931.

NEILL, CHARLES ERNEST, of the Board of Governors, in Montreal, December 16, 1931.

NEWSON, WILLIAM VICTOR, Arts '00, M.Sc. '01, in Edmonton, Alberta, October 30, 1931.

PICKARD, DR. LAWRENCE NELSON, Med. '02, in Winnipeg, Man., June 18, 1931.

POTTS, DR. JAMES McC., Med. '88, at Stirling, Ont., November 13, 1931.

SEIKEL, ADA (Ada Mitchell, Arts, '09), in Marysville, Mo., last autumn.

TEMPLE, DR. JAMES ALGERNON, Med. '65, LL.D. '13, in Toronto, December 6, 1931.

WHYTE, JOHN SMITH, Sci. '99, at Glace Bay, N.S., January 15, 1932.

Obituary

In the quarter year, loss to the University through the deaths of graduates has been severe, particularly in the Faculty of Medicine.

In the Maritime Provinces, the deaths of graduates reported to the Society include those of Dr. J. S. Bentley, former President of the Saint John Medical Society and of the Council of Physicians and Surgeons of New Brunswick, who died of heart disease in September; Dr. W. H. Hattie, who graduated before he had reached his twenty-first birthday, and, after serving as Provincial Health Officer of Nova Scotia, became in 1922, Assistant Dean and Professor of Hygiene in the Medical School of Dalhousie University; and J. S. Whyte, Mechanical Superintendent of the Dominion Coal Company, who died after an emergency operation in the Glace Bay General Hospital on January 15.

In Ontario, the University's loss was equally severe, including Dr. C. W. Hoare, former President of Essex County Medical Association, who graduated in 1888 and for more than forty years served the people of Walkerville, Ontario, as a devoted physician and, in 1917, as mayor; D. L. Desaulniers, a well-known law graduate and senior lawyer, who died in Ottawa on November 10; Dr. J. McC. Potts, one of the senior physicians of the Province, who died in Stirling on November 13; and Dr. J. A. Temple, Med. '65, former Professor of Gynæcology and Obstetrics in the University of Toronto, who retired in 1910 and died on December 6, 1931, aged 90. We also record with regret the death of Dr. Arthur Gun, of the staff of the Christie Street Hospital, Toronto, former Superintendent of the Military Hospital at Newmarket, who died in Toronto on August 15, 1930.

From Western Canada, too, news has been received of the passing of distinguished graduates, the number including W. V. Newson, former Principal of West Kent School, Charlottetown, P.E.I., who for some twenty years has served as Deputy Treasurer of the Province of Alberta; Dr. L. N. Pickard, who, after graduating in 1902, practised for twelve years in Newfoundland and then transferred to Winnipeg; the Reverend Edward McGougan, Calvin gold medallist of the Presbyterian College and pastor of Chalmers United Church, Vancouver; and Richard Hall, former Superintendent of Dredging in British Columbia, said to be the oldest McGill graduate in that Province.

In the United States, too, McGill has lost heavily, among the deaths reported being those of Dr. J. J. E. Maher, former member of the staff of Bellevue Hospital, New York, and retired gynæcologist and obstetrician, who was killed by an automobile at the corner of 121st Street and Lenox Avenue; Mrs. Ada Seikel, formerly Ada Mitchell, a graduate of Arts, 1909; the Reverend J. W. Cox, former pastor of Congregational churches at Maitland, Milton and Truro, Nova Scotia, and Sheffield, New Brunswick, who died at the home of his daughter in Brighton, Mass., on November 22; Dr. J. H. Gillespie, medical practitioner of New York city, who died of pneumonia on January 11; Dr. J. E. MacKenty, well known physician, also of New York, who died on December 11; F. W. J. McKibbin, head of the firm of Tompkins Bros., of Syracuse, who died in the Syracuse Memorial Hospital on December 23; and Elmer D. MacLeod, winner of the Byron medal in 1925, former assistant in the Department of Psychology and for the last three years sales manager of Witbeck Bros. of Albany.

In Montreal and district, death came to a number of men whose places in the University's fabric it will not be easy to fill. In addition to Mr. Justice Archibald, whose death is mentioned elsewhere, McGill deplores the death of Charles E. Neill, Vice-President and Managing Director of the Royal Bank of Canada and member of the University's Board of Governors; that of J. Alex. Cameron, one of the city's best known and most respected notaries, a graduate in Arts and Law, who died at his home on December 16; that of Charles S. Hanson, past student, partner of the stock broking firm of Hansons and Macaulay and former officer in the Canadian Field Artillery, who died in his garage in Westmount on February 17, from carbon monoxide, which accumulated in circumstances where concentration was not to be expected and that of Dr. D. J. McCallum. Dent. '27, who died in Danville, P.Q., a few days later.

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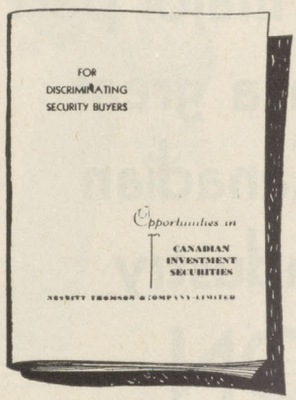
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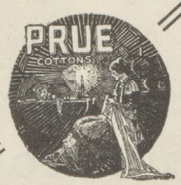
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Alumnæ Activities

(Continued from Page 19)

Society was influential in the decision to give women students representation in the Executive Council. It is devoutly to be wished that the Alumnæ Scholarship Committee may find a series of scholars worthy of succeeding their earliest choice.

Any reader of *The News*, whether a member of the Alumnæ or not, who is interested in this its latest enterprise, is invited to communicate with Mrs. Gordon Sproule, 39 Thornhill Avenue, Westmount.

Committee on Undergraduate Affairs. Two other Committees, created in response to the Alumnæ's increasing interest in the undergraduates, are the Committee on Undergraduate Affairs and the Building Committee. The latter has not as yet become fully active, though it gives promise of achieving interesting results in the future. The former has, up to the present, confined its activities to interesting the undergraduates in the Alumnæ Society, by inviting senior students to meetings of particular interest to them. This Committee will be in charge of the annual reception given in the spring to the graduating class by the Society.

Committee on the Canadian and International Federations of University Women. The Committee on the Canadian and International Federations of University Women was formed to keep the Alumnæ Society in touch with these two organizations in which it holds membership.

The Committee wishes to draw the attention of McGill alumnæ to the Sixth Conference of the International Federation, to be held in Edinburgh, by the invitation of the British Federation, from July 27 to August 4, at the George Watson Ladies' College, George Square.

Various branches of the British Federation are inviting delegates to visit their regions, under the guidance of their own members. The Cambridge Association will make arrangements for those wishing to visit Cambridge, from July 23 to 26, the programme to include visits to colleges, luncheons, a garden party, and teas. The Leeds, Bradford, and Huddersfield Associations also offer hospitality from July 22 to 26, with expeditions to York, the Bronte country, and the Yorkshire Abbeys. Birmingham is arranging expeditions to Kenilworth, Warwick, Stratford-on-Avon, which will include a Festival Play and a visit to the Cobwold country, plays by the Birmingham Repertory Theatre, and visits to any institutions in which members are interested. The London Association will conduct

sight-seeing tours in and around London. At Crosby Hall there will be a reception to all the members on the evening of Monday, July 25.

Manchester, Leicester, Cardiff, Oxford, Nottingham, Reading, Sheffield, Southampton, the Lake District, and other branches are also making plans for the entertainment of members. The Glasgow Association is offering group tours in Scotland; and Aberdeen is to undertake all arrangements for members who wish to visit Braemar and Deeside.

An eight-day tour of Ireland, with Belfast as point of departure, has been arranged for immediately after the Conference. The party is limited to 26, so those desiring to make the tour are advised to make arrangements early. The total inclusive fare will be £11.

Belgium, Denmark, and Jugoslavia are also offering tours, so this is a year in which McGill alumnæ may put their whole summer holidays into the hands of hospitable members of the British Federation of University Women and be assured of a wonderful time. They will open many doors to visitors, and expenses will be kept at a low level.

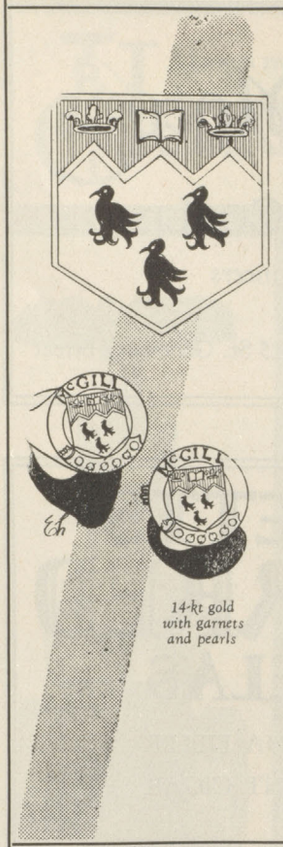
The Alumnæ Society hopes that a representation of members will take advantage of the summer's opportunities and attend the Conference. Also, as a European delegate pointed out at Wellesley last spring, "This is the kind of Conference we shall take our husbands to."

For further information about the Conference, tours, costs, etc., apply to the Secretary of this Committee, Miss Mabel Corner, University Women's Club, 3492 Peel St., Montreal.

Social Service Committee. The Social Service Committee of the Society was formed to serve as a link between the Montreal Social Agencies and members of the Alumnæ. It will shortly send to each member a questionnaire, based on a survey now being made by the Montreal Social Agencies, to determine just where she might like to help and how much time she would care to give to the work. Such a list of volunteer workers will add greatly to the usefulness of the committee.

At the Alumnæ meeting in January, the Social Service Committee took charge of the programme. Mrs. Jack Pembroke, a former social worker now doing great service as a volunteer, spoke on "The Volunteer Social Worker," and gave an interesting account of volunteer work in Montreal, with some very helpful suggestions.

Open Forum Group. The Open Forum Group has this year developed considerable interest in the study and discussion of current events. Numerous topics have been dealt with, and the



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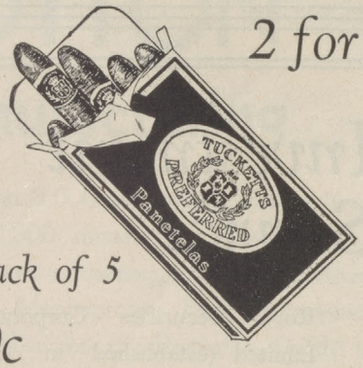
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Group, though still small, has proved enthusiastic. Several papers, now in preparation, will be presented shortly at one of the regular meetings of the Alumnæ Society.

The Modern Literature Study Group. Does the modern doctor encourage needless operations? Should Canada supply warring nations with munitions? Is George Bernard Shaw's Socialism really practical Christianity? These are some of the questions which the twenty members of the Modern Literature Study Group have discussed during an interesting review of the plays of Shaw. Under the leadership of Miss Ellen K. Brian, the group has studied Shaw and his attitude towards the professions, towards social questions and towards women.

From Shaw the group passed to Pirandello and the "new" theatre, leaving propaganda for psychology, but finding in such plays as "Henry the Fourth" and "Six Characters in Search of an Author" subjects for stimulating analysis.

Though Gertrude Atherton defines study groups as "Women who pursue culture in bands because they are afraid to meet it alone," the members of this group find an incentive in the different opinions which result from an intelligent and careful reading of the plays: and the novel and penetrating views frequently expressed show that the members of this group, at least, are not afraid to think for themselves.

Group for the Study of French. Among the groups organized by the Society last year, and still active, is one interested in conversational French. This Group meets once a week, under the guidance of a resident tutor in the French Department. Though the membership is small, and the Group does not claim to make any contribution to the welfare of the Society as a whole, the members are finding pleasure in their informal gatherings, a pleasure enhanced by their good fortune in having as a meeting place one of the charming reception rooms in the new wing of the Royal Victoria College.

"Old McGill"

A PUBLICATION of interest to graduates of McGill is to appear at about the date this issue of *The News* reaches its readers. The forthcoming edition of "Old McGill"—the Year Book for 1932—is planned to appeal to all who have an interest in their Alma Mater.

The Year Book, or Annual, is this time designed as a de luxe souvenir volume for all members of the University be they seniors, freshmen, or graduates of many years standing. The one hundred and tenth anniversary of the founding

of McGill suggested to the Editorial Board that a radical departure ought to be made from the many previous issues.

The opening page, therefore, bears testimony to the universal character of the volume and the Editors acknowledge the debt owed by the undergraduate to his predecessor. The book is respectfully dedicated to every one of McGill's many graduates, and it is expected that it will be received as a personal tribute by all who cherish an affection for their college.

The definite purpose of the Editorial Board has been to create a valuable addition to the graduate's library. To realise this ambition an entire section of the book is devoted to the story of the University. Dr. Cyrus Macmillan, McGill's historian, has contributed a short history of the University. This is illustrated by unique reproductions. The charter granted to the Royal Institution for the Advancement of Learning has been photographed. The University authorities allowed the Bank of Montreal to release this valuable parchment from their vaults in order to have it reproduced. This is the first time that the charter has been before the public. The detail is perfect and the script can be read with the naked eye.

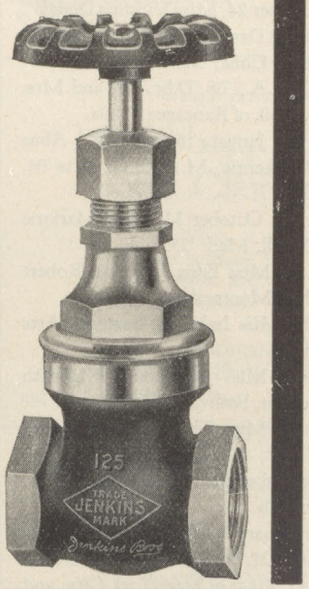
Another "scoop," if a newspaper term may be applied, is a reproduction of James McGill's will, dated in 1813, which led to the cause célèbre of Désrivières and Richardson. After litigation for many years, the will was finally admitted to probate and resulted in the gift of Burnside Place and £10,000 to the Royal Institution for the Advancement of Learning for the erection of a college. This manuscript has been taken from the dusty archives of Montreal's Old Court House and is appearing in the pages of "Old McGill, 1932."

The history, the will, and the charter form a unique addition to McGilliana, and the Editorial Board is proud of this feature. A Whitefield print of Montreal in the early days of the 19th century and an early picture of McGill College are other distinctions. Every graduate will find in this section of the Annual a fascinating remembrance of his college.

A distinctive cover, the make-up of the book, and the fine illustrative work suggest that the trite phrase "the best ever published" will not ring hollow. With all due pride it is modestly forecast that graduates, undergraduates, and all friends of the University will be pleased to have in their book-nooks the one true volume "Old McGill."

SAUL HAYES,
Editor-in-Chief
"Old McGill 1932."

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Marriages

ALEXANDOR—On December 2, Miss Huldah Alexandor, Arts '29, and Melvin Chorney, of Montreal.

BEST—In Toronto, on December 31, Miss Kathleen Best, M.A. '30, and Sydney Ward Phelps, of Montreal.

BUFFAM—At Perth, Ont., on December 26, Miss Alice Aileen Thompson and Basil Scott W. Buffam, M.Sc., Ph.D., Sci. '23, of Buffalo, N.Y.

COX—On September 19, Miss Eleanor Cox, past student of Music, and John Halsey Henderson, of Passiac, N.J.

DAWSON—In London, England, on December 24, Miss Virginia Douglas, of Montreal, and Dr. Howard LeRossignol Dawson, Arts '18, 'Med. 21.

DENNY-EVE—In February, in Santiago, Chile, Miss Joan Eve, past student, daughter of Prof. A. S. Eve, M.A., '08, D.Sc. '08, and Mrs. Eve, Montreal, and Denison Denny, Sci. '30, of Rancagua, Chile.

MACKENZIE—At Abernethy, Sask., on January 6, Miss E. Alma Motherwell and Rev. Angus Donald Mackenzie, M.A., B.D., Arts '04, of Regina, Sask.

McDONELL—At Three Rivers, Que., on October 31, Miss Marjorie Sullivan and Dr. Eugene Donald McDonell, Med. '25.

MOYSE—In Montreal, on November 14, Miss Edna Day and Robert Edwin Moyse, Arts '11, Law '14, both of Montreal.

SOMMER—In Montreal, on January 28, Miss Isabel H. Sommer, Arts '25, and Mr. Saul Silverman, of Toronto.

STEPHENS—In December, in Montreal, Miss Jean Louise McBeath and Sidney Allan Stephens, jr., past student, both of Montreal.

TESSIER—In Montreal, on October 27, Miss Thérèse Lemoine and Dr. Leo J. Tessier, Med. '31.

WEINBERG—In Buffalo, N.Y., on December 12, 1931, Miss Pauline Satuloff and Marvin S. Weinberg, Com. '28.

WHITCOMB—At Smiths Falls, Ont., on January 2, Miss Jean McWatters and Dr. Harold Austin Whitcomb, Med. '21, both of Smiths Falls.

WIGHT—On October 31, Miss Lucille G. King, of New York City, and Dr. G. Earle Wight, Med. '25, of Godbout, Que.

WINN—In Montreal, in February, Miss Lois Gertrude Burpe and Dr. Albert Reginald Winn, Arts '23, Dent. '28, both of Montreal.

Births

ABBOTT—In Montreal, on December 20, to Arthur C. Abbott, Sci. '26, and Mrs. Abbott, a daughter.

ALEXANDER—In Montreal, on January 17, to E. Ryckman Alexander, Arts '24, and Mrs. Alexander (Helen Parker, B.H.S. '26), a son.

AMBRIDGE—In Quebec, on January 5, to D. W. Ambridge, Sci. '23, and Mrs. Ambridge, a son.

BALLON—In Montreal, on December 23, to Dr. D. H. Ballon, Arts '08, Med. '09, and Mrs. Ballon, a son.

COMMON—In Montreal, on January 6, to Dr. John S. Common, Dent. '20, and Mrs. Common, a daughter.

EMERY—In Montreal, on January 4, to H. J. Emery, Sci. '20, and Mrs. Emery, a son.

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FINDLAY—In Montreal, on November 21, to Rev. E. A. Findlay, Arts '14, and Mrs. Findlay, a daughter.

GALLANT—In Richmond, Virginia, on September 25, to Dr. J. Arthur Gallant, Med. '28, and Mrs. Gallant, a son.

HUTCHISON—In Montreal, on January 8, to Paul P. Hutchison, Arts '16, Law '21, and Mrs. Hutchison, a daughter.

JOHNSTON—In Montreal, on January 17, to H. Wyatt Johnston, Sci. '21, and Mrs. Johnston (Beatrice Lyman, Arts '27), a daughter and a son.

KIRK—In Montreal, on December 19, to Dr. C. M. Kirk, Med. '26, and Mrs. Kirk, a daughter.

LE BARON—At Three Rivers, Que., on November 6, to K. S. Le Baron, Sci. '23, and Mrs. Le Baron, a daughter.

MACLEAN—In New Orleans, La., on November 22, to Dr. Basil C. MacLean, Med. '25, and Mrs. MacLean, a daughter.

MACMILLAN—In Los Angeles, California, on December 13, to Dr. Douglas W. MacMillan, Med. '22, and Mrs. MacMillan, a daughter.

MUNDELL—In Montreal, on December 27, to Mr. and Mrs. C. D. T. Mundell (Elise Dunton, Arts '25), a son.

MUNRO—In Montreal, on January 31, to William Munro, Sci. '23, and Mrs. Munro, a son.

NEILSON—In Montreal, on January 4, to Stanley A. Neilson, Sci. '16, and Mrs. Neilson, a son.

O'BRIEN—In Montreal, on November 19, to John L. O'Brien, Arts '20, Law '23, and Mrs. O'Brien, a daughter.

O'HEIR—In Montreal, on November 14, to H. B. O'Heir, M.Sc., Arts '23, and Mrs. O'Heir, a daughter.

PEARSON—In Montreal, on November 14, to Dr. H. H. Pearson, Dent. '17, and Mrs. Pearson, a daughter.

PRINGLE—In Montreal, on December 1, to Mr. and Mrs. J. B. Pringle, (Jessie Wilson, Arts '29), a son.

RADLEY—At Arvida, Que., on December 5, to Percy E. Radley, Sci. '23, and Mrs. Radley (Lorna W. Kerr, Arts '23), a daughter.

RIORDON—At Nkana, Northern Rhodesia, on January 28, to Charles H. Riordon, Sci. '27, and Mrs. Riordon, a son.

ROBINSON—In Montreal, on November 17, to Jonathan Robinson, Law '23, and Mrs. Robinson, a daughter.

SANDERS—At Arnprior, Ont., on December 16, to Dr. J. L. Sanders, Arts '16, Med. '21, and Mrs. Sanders, a daughter.

SCOTT—At Shawinigan Falls, Que., on December 20, to J. McD. Scott, Sci. '23, and Mrs. Scott, a daughter.

SHOTWELL—In New York City, on November 21, to John S. G. Shotwell, Sci. '23, and Mrs. Shotwell, a daughter.

YOUNG—In Winnipeg, on October 14, to Mr. and Mrs. Norman Young (Grace Moody, Arts '20), a daughter.

University News and Notes

(*Continued from Page 57*)

with an address by Professor H. Walter, head of the German Department, on "Goethe's Life," continuing with lectures by Professor W. L. Graff; Professor Fairley, University of Toronto; Professor C. W. Hendel, Dr. J. W. A. Hickson, Professor H. Oertel, and Professor A. S. Noad; and concluding on March 14 with a dramatic recital in German by Max Monto, of New York.

WEST INDIAN BRANCHES

In a letter dated February 2, H. G. Keith reports to the Graduates' Society on the results of his interviews with McGill graduates and others in Bermuda and the British West Indies. Mr. Keith, who is a member of the Canadian trade ship party, has been most kindly received and has been able to establish a number of relationships that should prove of value to McGill. Geographical and other difficulties, however, hinder the establishment of the branches of the Graduates' Society which had been contemplated.

Late Sporting Results

Feb. 26—McGill wins Intercollegiate Swimming Championship, defeating Toronto 48–21.

Feb. 27—McGill wins Intercollegiate Gym. title, for fifth consecutive year.

Feb. 27—Queen's wins B.W. & F. title, McGill winning the fencing.

Feb. 29—McGill beats Queen's 35–31 at basketball, completing second season without defeat.

Feb. 29—McGill defeats M.A.A.A. 2–1, in first game of Senior hockey play-off.

March 2—M.A.A.A. defeats McGill 3–1, winning Province of Quebec Senior Group Hockey Championship by 4–3.

March 2—McGill wins City of Montreal Basketball Championship, defeating Fusiliers, Province of Quebec Champions, by 37–35.

Lost Addresses

Any information in regard to the graduates listed below will be welcomed by the Executive Secretary of the Graduates' Society.

DENT. '23—John W. Carter
Leslie G. Robinson
Chas. Wm. Tanner

SCI. '23—Robert N. McLeod
E. J. Murphy
Rene A. Pelletier
Howard E. Reid
Lewis J. Scott
Thos. K. Sherwood
Gordon R. Stephen
Clarence Taylor
B. B. Tucker
Leslie A. Watt
Phillip C. Ahern
Eric G. Bishop
Jean C. Brodeur
D. A. Duff
Richard C. Gegg
Harry J. Goldberg

MED. '24—Lester T. Lamoy
Edward Marcotte
Samuel Richstone
Horace O. Wilson

SCI. '24—Frank R. Campbell
John H. Crane
George J. Farnsworth
Wm. P. Ferguson
Walter J. Kingsmill
Henry R. Lanctot
Wilfrid L. Lane
Leo. G. McLaren
A. M. Ridout
M. L. Schleifstein

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JONATHAN ROBINSON — JOHN F. CHISOLM
G. MILLER HYDE — H. LARRATT SMITH
EDMOND H. EBERTS — H. WEIR DAVIS

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Sydney W. Williams
J. W. Wyse

DENT. '25—Francis Corin
Ellis Gatenby
Lawrence Goodman
Wm. David McLeod

SCI. '25—Colin Blair Brown
C. R. Chalker
Paul Chung Fan
Edmund B. Fry
Halder Smith Kirby
Cecil T. Lane
Francis White McMaster
Alexander Ree
Donald Flannery Smith
Edward M. Velasco
Albert J. P. Walter
James Wood

MED. '26—Harper W. Finney
A. Francis McAulay

ARTS '26—Joseph S. Abrahamovitch
L. Mortimer Becker
A. G. Cuthbertson
Alfred J. G. Langley
Samuel Mintzberg
Ralph L. Smith
Earle L. Swift

ARTS '27—Barskey, Simon
Damaske, Ernest
Francis, Selby Wilson
Hollingsworth, Wm. David Grant
Hudson, James C.
Kershman, John
MacDonald, James
MacLeod, Malcolm
Oxley, A. K. H.
Seaman, A. T.
Shaffer, Louis
Yisudas, Benjamin U.
Perry, Pansy Elene
Turner, Alice Willard

SCI. '27—Thomas Owen Evans
Patrick John Hare
Willard D. Taylor
Christopher Vokes
William S. Yuile

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M. Magid
Robert Pursley
Hugh M. Stewart
Alex T. Thom

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1922—Becker, Louis J.
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Frederick, W. Douglas
Jones, G. Ford
MacMahon, Hugh B.
Richter, Wm. H.
Shea, Wm. M.
Shecter, Max. M.
Steine, Mitchell
Wilson, Donald G.

1923—Brenchley, Charles R.
Brown, James C. G.
Currie, George R.
Enzer, Emmanuel
Friedman, William
Laidlaw, Gordon L.
Leckie, George Duncan
Magid, Jacob L.
Negru, Myer Noel
Rabinovitch, Reuben R.
Scott, Robert K.
Segal, Mendel
Willoughby, Gerald W.
Wightman, L. McG.

1924—Azeff, Henry
Cooper, Gilbert A.
Galley, Andrew H.
Kearns, Gerald Vincent
Silverman, Levi
Spence, T. W. J.

1925—Heilig, Harold I.
McKay, Douglas A.
Richardson, Fred. Donald
Silverman, David
Thomas, Wm. J.

1926—Witmer, Earl R. W.

1927—Ellison, Hilda
Harkness, Andrew Ross
Hausner, Isidore David
Palef, Harry

1928—Kivenko, Nathan Manuel
Morrell, Donald Leonard
Seymour, James Wm.

1929—Gamble, John McG.

LOST ADDRESSES IN MEDICINE

J. Allen, '95
E. D. Ault, '90
T. F. Bayfield, '01
A. H. Beers, '91
J. J. Benny, '05
S. D. Berard, '17
J. W. K. Bickford, '26
E. D. I. Brown, '18
F. Brown, '05
W. E. Burton, '10
B. F. Butler, '79
H. Campbell, '20
R. W. Carroll, '93
N. E. Challenger, '19
Hugh H. Chan, '25
R. W. Clarke, '70
F. G. B. Clarke, '76
S. L. Clindinin, '97
Jacob Cohen, '25
C. R. Cook, '00
H. E. Cumming, '13
T. J. J. Curran, '97
R. deBoyrie, '29
J. P. Denny, '15
A. Dewar, '91
A. J. Donnelly, '00
F. J. Donnelly, '18
J. M. Donnelly, '18
G. C. Duncan, '75
H. L. Elliott, '29
S. G. Elliott, '24
J. T. Farley, '77
John Francis, '14
C. M. Francis, '18
A. McI. Fyfe, '08

Beneath Mount Royal

(*Written on a visit to the old college grounds by the late* W. V. Newson, *Science 1900.*)

Read at the banquet to Chancellor Beatty and Dean C. F. Martin, Edmonton, Sept. 27, 1929, North (central) Alberta branch of the Graduates Society by Mrs. Alice Lucas of the Dept. of Expression, Alberta College.

Dear avenues! Dear elms! Calm musty halls,
Dearest of all! what fluttering hours, hope blent,
Lapsed here—wine-red Autumn leaves wind spent
And scattered! But there, rest your vine clad walls,
As of old, beneath thy sheltering mount.
"McGill!" "McGill!" wakens that call the heart,
As in the mellow past, to things fondly apart:
Gay friends, grave masters; and memory to count
Its precious images: some classic line,
Some favoured nook, some rare unblemished soul,
Both cavilled at and loved for being fine.
One returns; leaves the half unyielded goal
To find thine old enchantments still the same . . .
Save the old rich glamour—and dreams of fame.

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McGILL NEWS

VOLUME 13 JUNE, 1932 NUMBER 3

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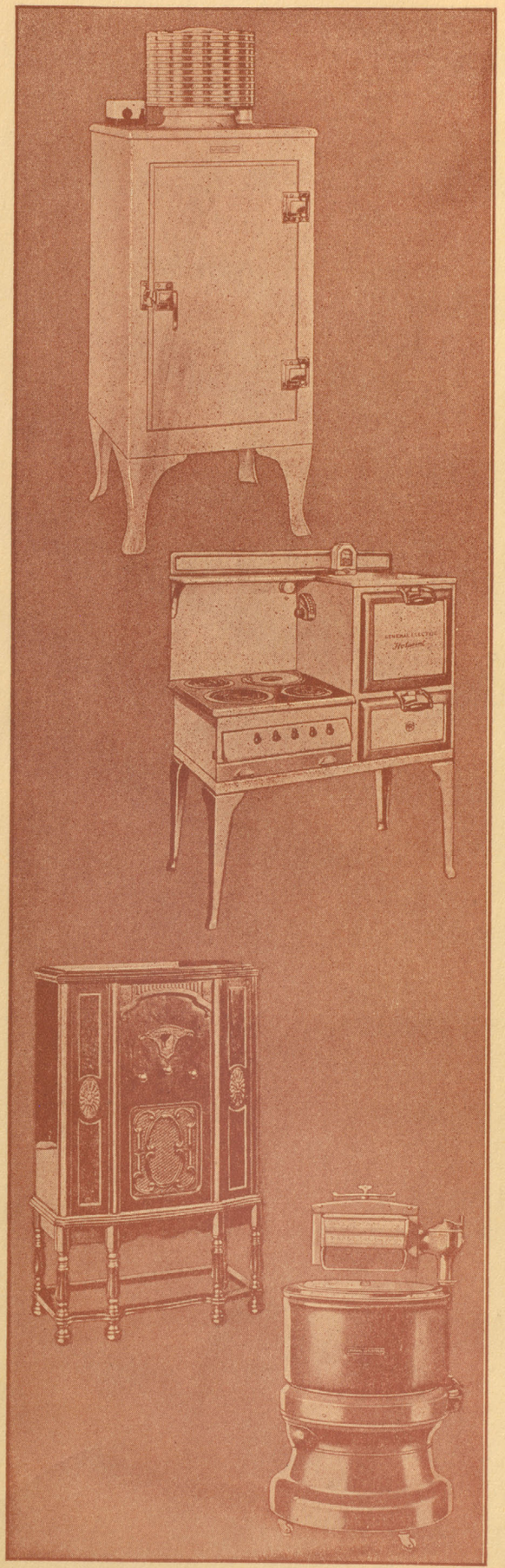
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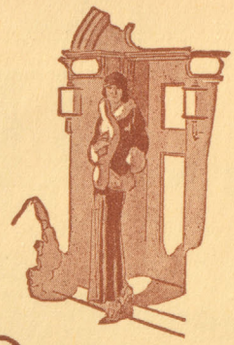
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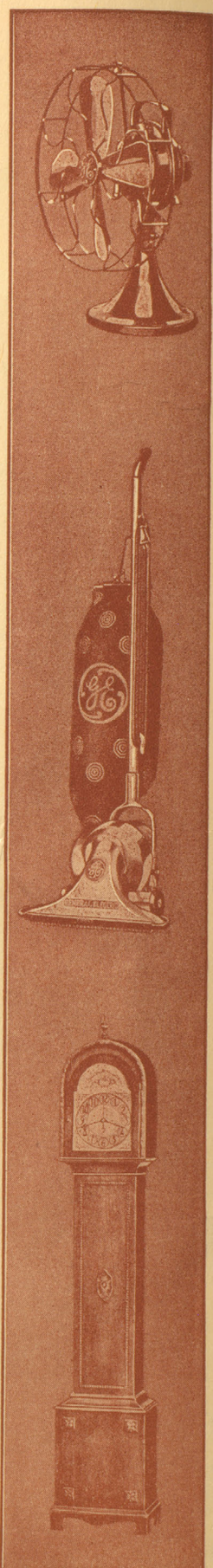
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THE McGILL NEWS

OFFICIAL PUBLICATION of the GRADUATES' SOCIETY OF McGILL UNIVERSITY

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Please address all communications to *The McGill News*, Graduates' Society, McGill University, Montreal

VOL. XIII JUNE, 1932 No. 3

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This magazine is distributed to the members of the Graduates' Society of McGill University—Annual Dues $3.00. To those not eligible for membership in the Society, the annual subscription is $3.00.

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The Graduates' Society Employment Bureau

The Bureau gives free information and assistance to all graduates and past students, and helps employers to secure the personnel they may desire.

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WEATHER FORECAST
Moderate variable winds; fair and moderately warm.
For complete weather report see page seven.

The Gazette.

Temperature Yesterday Max., 51; Min., 36
Same Date Last Year Max., 69; Min., 43

VOL. CLXI. No. 95 COMPLETE EDITION MONTREAL, WEDNESDAY, APRIL 20, 1932.—TWENTY-FOUR PAGES COMPLETE EDITION PRICE FIVE CENTS

Rockefeller Foundation Grants $1,232,652 to McGill

GIFT INTENDED FOR NEUROLOGY INSTITUTE HERE

Fruition Will Make University Centre for Continent

GOVERNORS' ACCEPTANCE

Dr. Wilder G. Penfield to Be Head—City and Province Promise Aid

A grant of $1,232,652 from the Rockefeller Foundation to McGill University for the establishment of a neurological institute was announced following a special meeting of the Board of Governors of McGill, held in the C.P.R. Building yesterday afternoon. The co-operation of both provincial and civic authorities in this work has been assured, over $150,000 has been pledged by friends of the University and members of the govern-

DELEGATION IN QUEBEC

Montreal Seeks Extension of Unemployment Relief

Quebec, April 19.—Headed by Alderman Maurice Dalton, president of the Executive Committee, Leon Trepanier, leader of the Council and Alderman Desilets, member of the Executive, representatives of the city of Montreal reached here this evening to wait tomorrow on Premier Taschereau and members of the cabinet regarding unemployment relief. In addition to those mentioned are also A. Honore Gagnon, director of public services, Albert Chevalier, director of police assistance, and C. E. Gelinas, engineer in charge of unemployment works of the city of Montreal. The delegation, which will call on the cabinet tomorrow morning at ten thirty, will suggest that a delay be granted for the execution of public works under the federal unemployment relief plan from the first of May to the first of July.

Premier Taschereau has already received similar requests from other cities and towns and has answered that he would see no objection to the contribution of the Quebec Government and municipalities being given after the first of May under the federal scheme if Premier Bennett wanted to extend also the time limit to the same date.

RADIO SOUGHT FOR EDUCATION

CITY MAY HAVE THOUSANDS TO SHELTER MAY 1

Drill Hall Sought as Refuge for Evicted Families

CITY IS TAKING STEPS

Ald. Savard Says Metropolitan Boulevard Likely This Year

When May 1 and "moving day" rolls around, Montreal will face one of the most difficult problems yet, Ald. J. Alonzo Savard, of St. Denis ward, told members of the Dorion Labor Club last night at a meeting at 3312 Papineau avenue.

"Thousands of families, penniless and suffering from unemployment, will face eviction from their homes onto the sidewalks," he affirmed. "Unable to sign new leases because they have no money, and because

VEHICLE LIGHTS URGED

Quebec Grand Jury Makes Report on Motor Accidents

Quebec, April 19.—A recommendation that candidates for automobile drivers' licences be put through tests stricter than those at present required to ascertain their physical and mental condition, was contained in the report of the Quebec grand jury, submitted to Chief Justice Sir Francois Lemieux here this afternoon. The jury, which was sworn in at the beginning of the criminal session, has completed its work.

The jurymen returned true bills in a dozen cases, the most serious of which were two manslaughter charges, both as a result of motor accidents. The report recommends that all vehicles be obliged to carry lights on the extreme left and that the width of winter roads be increased from 18 to 20 feet.

Satisfaction was expressed by the jury as a result of a visit to the Quebec jail, the Beauport asylum and the new women's jail.

GRADUAL REDUCING OF ARMS APPROVED

Geneva Conference Stiffens Attitude on Sino-Japanese Evacuation Problem

(Associated Press Cable.)

TO REGAIN LOST RECORD

Noted British Aviator on England-Australia Flight

(Canadian Press Cable.)

Heindal, Italy, April 19.—G. W. R. Scott, noted British flier, seeking to establish a new record for flight between England and Australia, landed here at 6:05 this evening and took off again immediately after refueling, hoping to reach Aleppo, Syria, tomorrow.

Scott left Lympne aerodrome, England, at five o'clock this morning in an attempt to regain possession of the record he lost last year when C. A. Butler made the 13,187-mile flight between England and Australia in nine days, two hours and 25 minutes, one hour and 42 minutes faster than Scott's previous time.

When he took off this morning Scott said he hoped to complete the flight, landing at Port Darwin, Australia, in eight and one-half days.

LABOR MAY OPPOSE ABOLITION OF OATH

De Valera Will Present Bill in Dail for First Reading Today

(Canadian Press Cable)

RAILWAYS PLAN TO FIGHT BUS COMPETITION

Thornton Says C.N.R. and C.P.R. to Use Highways

LINES' CO-OPERATION

Present Situation Is Unfair to Great Transportation Systems, He Says

By F. C. MEARS.

(Gazette Resident Correspondent.)

Ottawa, April 19. — "Competition ought at least to be fair and when it is fair then we have got to take our chances," declared Sir Henry Thornton, president of the Canadian National Railways, today before the House Committee on National Railways and Shipping, during a lengthy discussion of the extent to which bus and truck and competition was eating into the

British Budget Highlights

London, April 19.—The Budget presented in the House of Commons today by Neville Chamberlain, Chancellor of the Exchequer, showing a surplus of £796,000, reveals the following figures:

REVENUE

Existing taxes (excluding recent import duties)	£731,300,000
Ten per cent. duties	27,000,000
New duties to come	5,000,000
Abnormal duties	1,000,000
Tea tax	3,000,000
Silk tax	25,000
Total revenue	£767,325,000

EXPENDITURES.

General purposes	£766,004,000
Less in Colonial sugar concession	1,100,000
Less in motorcycle taxes	25,000
Total expenditures	£767,129,000
Total revenue	767,325,000
Total surplus	£796,000

NARCOTIC DRUG CHECK FAVORED

Senate Approves Convention

BRITISH BUDGET GIVES NO RELIEF TO TAXPAYERS

Disappointment Keen as Burden Remains Unchanged

DUTY ON TEA RESTORED

Chancellor Now Estimates Surplus of £796,000—Empire Preference Given

By GEORGE HAMBLETON.

(Canadian Press Staff Writer)

(Canadian Press Cable)

London, April 19. — The long-suffering British taxpayer found no relief in today's budget. In the first Budget speech he has made, Neville Chamberlain, Chancellor of the Exchequer, maintained the heavy load of taxation imposed in the emergency Budget of last September. He did so with many expressions of regret.

Announcement of the Rockefeller Institute's recent gift to McGill

The McGill University Neurological Institute

By DEAN C. F. MARTIN

GRADUATES of McGill will receive the news of a magnificent gift by the Rockefeller Foundation to the Medical Faculty with special interest and appreciation. It comes as a consummation of several years of effort on the part of the Faculty to build up the Department of Surgery into a more complete unit.

Realizing, some years ago, the need of more skilled and expert service in the field of neurological surgery (in which he himself was no mean exponent), Professor E. W. Archibald cast about for someone suitable to initiate and develop a sub-department in the University and to serve in the Royal Victoria and Montreal General Hospitals. With this end in view, he searched the field in Great Britain and in the United States, but, strangely enough, among a comparatively large group of surgeons, few seemed suitable in this specialty to meet the ideals held for a department at McGill.

After lengthy consideration and several visits of enquiry to other cities, it was finally decided to invite Dr. Wilder G. Penfield—then Associate Professor of Surgery in Columbia University and an attendant Surgeon at the Presbyterian Hospital, New York—to visit Montreal and, as it were, look over the ground, with a view to making this a possible centre for his future career. Fortunately for us, conditions in New York were at that time unfavourable to a development along the lines of Dr. Penfield's ambition; and so he came, and saw, and was apparently impressed with the environment here.

Opportunities in Montreal were obviously great; the field had scarcely been touched; the personnel among his associates in the University and at the Hospitals seemed to be to his liking; and so he decided to link his fortunes temporarily with McGill.

There remained only the necessity of assuring him of moral and of some financial support. Already friends of the University had contributed sums to encourage neurological research, among whom, in these early days, should be mentioned

McGill University Library



DR. WILDER G. PENFIELD

Mr. Howard Murray. Further support to satisfy Dr. Penfield's requirements was found among friends of the Faculty, who were enabled to guarantee him personally their help over a period of five years.

Associated with him in his work in New York, Penfield had a *fidus Achates* in the person of Dr. W. V. Cone, a graduate of Iowa University, who had worked with him for years. He wanted Cone to join him in the new work and, thanks to friends who remain anonymous, it was made possible to invite Cone to form a team combining both the clinical and the histo-pathological aspects of the work.

It is interesting here to note, too, that Cone was attracted to McGill, not so much for the clinical opportunities, which were obviously unique, but much more because of the opportunities for animal experimentation, made easy through the erection of a building for this special purpose, with the promise of laboratories for his pathological investigations.

One recalls with what misgiving we listened to Penfield's remarks at a dinner given to a meeting of Neurological Surgeons in Montreal shortly after he had taken on his duties among us. He described how the field was bare of material; and how few neuro-surgical cases had come under his care during the first few months after his arrival. These depressing conditions, however, were not destined to last long, for soon the profession recognized that masters were among them in the field, and the amount of material grew by leaps and bounds.

In the first year of their sojourn in Montreal, there were but a paltry dozen of tumours of the spinal cord. In the second year of their service, twelve similar cases arrived within a period of six weeks. The total number of operations on the nervous system in the first year of their service numbered scarcely sixty; but during the third year of their sojourn in Montreal, a report shows a total of three hundred and thirty-seven, of which many were of a major kind.

As in surgical neurology, so in medical neurology, the attraction of a team such as this brought all varieties of patients suffering from manifestations of neurological disease.

Like all other men with a vision, Penfield had long wanted something more than clinical material. It had always been his ambition to be the leader of a Neurological Institute, a place where there was something else than money—accommodation for patients, facilities for research, opportunity to extend the boundaries of knowledge in neurology and neuro-surgery, and a budget with which to carry on efficiently a service of the highest order.

It is known that the profession in Montreal welcomed him warmly. At both the Royal Victoria Hospital and the Montreal General Hospital the doors were opened wide in welcome. Penfield was made a consultant at both hospitals, and Cone was welcomed as his associate.

It was obvious, however, that budgets were needed. Expenses mounted; and although he had received from interested friends the sum of $55,000 for research, this was obviously inadequate to carry on his ambitious plans.

Friends, who had already anonymously contributed $25,000 to bring Cone to Montreal, voluntarily doubled the amount when they heard that Cone was being called to another university. Efforts were made to attract both men from McGill; and so it became urgent to plan for the establishment of an institute of the first rank.

Dr. Penfield, of his own accord, approached the Rockefeller Foundation, found them interested, and so developed plans. He had already given them a report of his experience on a visit to Germany where he had seen neurological institutes carried on in accordance with his own ideals.

The Principal of McGill—always quick to recognize the worth of men—gave every encouragement, and without much delay the City, the Province, and interested friends were invited to contribute to the scheme.

Among those who accepted the invitation and contributed most generously were Sir Herbert Holt, President of the Royal Victoria Hospital, and Mr. J. W. McConnell and Mr. Walter Stewart, of McGill's and the Hospital's Boards of Governors.

And so it came to pass that the Rockefeller Foundation finally gave their support to the erection of a Neurological Institute in Montreal at McGill, a decision made after careful consideration and personal visits, which convinced them as to the wisdom of founding a centre for the continent, where the opportunities, the interest, and the personnel could assure it of success.

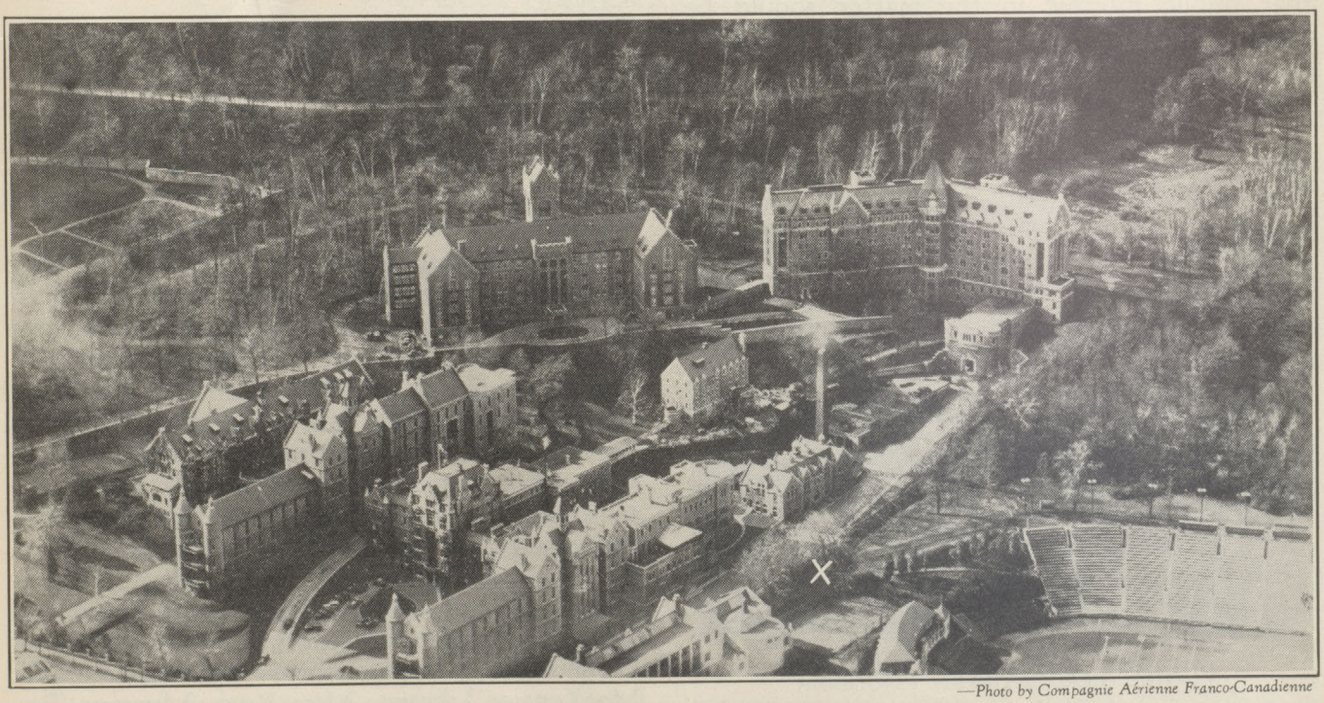
Their gift of one and a quarter million dollars—to which they most generously added an appropriation of $50,000, to carry on scientific work pending the completion of the building—supplemented by the private contributions above mentioned, will permit of a building seven storeys high and one hundred feet long. This new Institute will be erected on University property in close proximity to the Pathological Institute, and in direct connection with the Royal Victoria Hospital. It will accommodate approximately thirty patients—public, private, and semi-private—and will provide for an operating suite, x-ray equipment, animal rooms, and laboratory space for carrying on pathological and histological work.

It is proposed to provide living accommodation for a small group of research fellows, and to keep in close contact with the other laboratories and wards of the Hospital.

It is Dr. Penfield's intention to bring to this Institute a personnel of the highest quality, to develop a training school for neurologists and neuro-surgeons, and to carry on research of a high order. At the same time, of course, he will provide for the best of treatment for patients.

In addition to this, it is interesting to record that special opportunities will be offered to French-Canadian colleagues of this Province who desire to enter on a period of serious training.

This generous gift then will add prestige to our School. It will increase the facilities for undergraduate and post-graduate study, and give an added stimulus and encouragement to all those who are engaged in developing the Medical Faculty.



—Photo by Compagnie Aérienne Franco-Canadienne

VIEW OF THE ROYAL VICTORIA HOSPITAL SHOWING THE PROPOSED SITE OF THE NEW NEUROLOGICAL INSTITUTE

The site indicated by the cross in this photograph would mean a change in the present entrances to the Stadium. Adequate entrances from Pine Avenue are likely to result, but plans are not yet ready for announcement.

McGill University Library

Alumnæ Annual Meeting

AN active year was reported upon at the Annual Meeting of the McGill Alumnæ Society in the Royal Victoria College, on May 10. All nine of the special Committees of the Society presented interesting reports.

Among the outstanding achievements noted was the foundation of loan, endowment, and bursary funds for the benefit of women students. A number of subscriptions secured by the Scholarship Committee are to be annual, two bequests have been promised, and contributions of special interest included $50 raised by the class of 1904. Mrs. George C. McDonald, reporting for the Committee, pointed out that this was a promising beginning. The need of such funds, particularly at the present time, was stressed.

Mrs. Walter Vaughan, in the report of the Building Committee, mentioned that subscriptions to enable the purchase of seven pictures still required for the main ground floor rooms of the new R.V.C. wing were desired. Any attempt to secure financial support for the erection of a building on University Street, to house Common and Reading Rooms for non-resident women students, a gymnasium, swimming pool, etc., had been abandoned for this year, in view of the difficulties of the times, but it was desirable that public interest in the matter should be aroused, since the completion of the new wing of the Royal Victoria College had exhausted all available funds for building purposes, and it would be at least thirty years before sufficient funds would accumulate from Lord Strathcona's endowment to enable further expansion. This endowment, up to the present time, has been the only source of funds for women's buildings at McGill.



McGILL GRADUATES IN RHODESIA

With one easily-identifiable exception, all members of the above group attended McGill. From left to right they are: Hepburn Ellis, Sci. '25, Ernestine Ellis Riordon, past student, Marjory Doble Baillon, Arts '29, Kay Newnham Ellis, Arts '22, and Harold Riordon, Sci. '26.

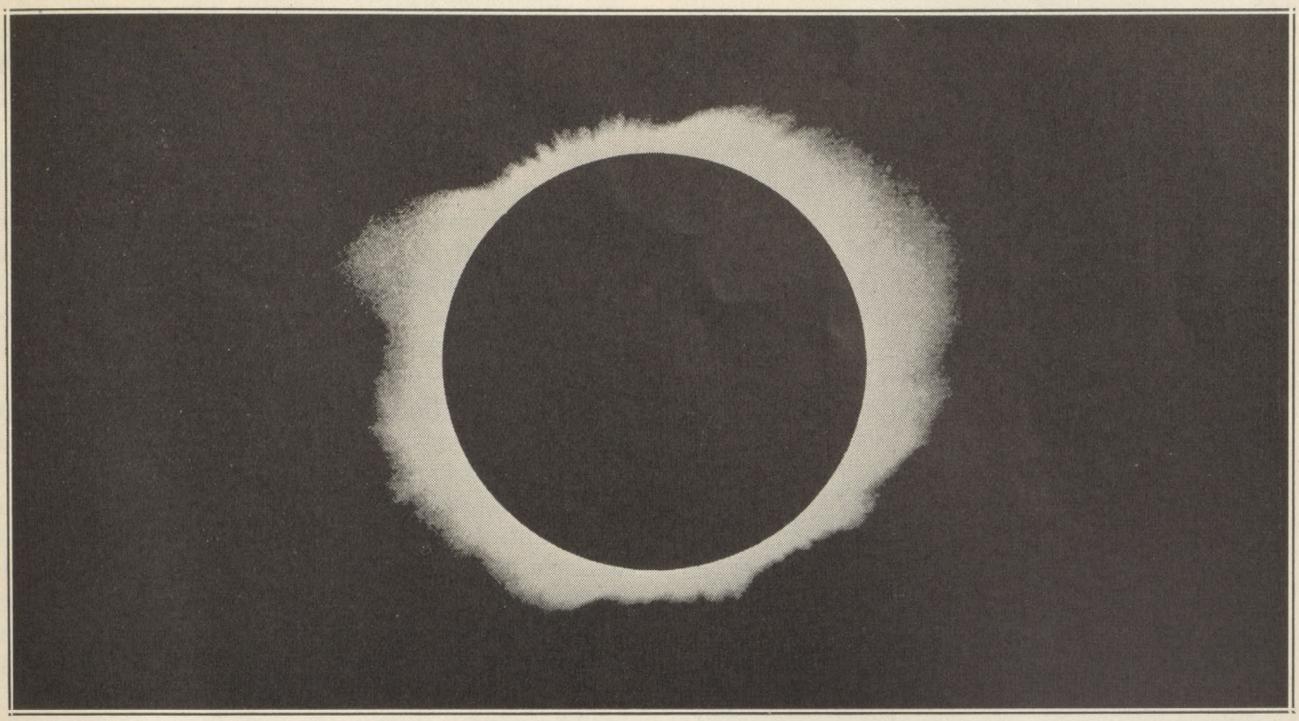
The report of the Library Committee mentioned with regret the retirement of Miss Inez Bayliss, who had been actively and continuously associated with its work since 1917.

The Household Science Graduates' Society announced that it would henceforth function as a Committee of the McGill Alumnæ Society. There are now 45 graduates of the Four-Year Course in Household Science, a comparatively recent offering of McGill. Twelve of these are resident in Montreal. In the past winter their organization has been engaged on a nutrition project, supplying food to underweight school children, and has recorded some interesting results.

The Committee on the Canadian and International Federations of University Women, the Membership Committee, and the Open Forum, Modern Literature, and French Conversation Groups, as well as the Alumnæ representatives on the University Settlement Board and on the Local Council of Women, reported on the year's activities.

Total receipts of the Society amounted to $1,175.55, leaving a balance of $568.06. The concert by Mr. Paul de Marky, organized in April realized a net profit of $172 for the Scholarship Committee. The meeting voted a grant of $100 to the University Settlement to be applied to sending children to its summer camp.

The following officers were elected for the coming year: President, Mrs. Gordon Sproule; 1st Vice-President, Mrs. Michael Tucker; 2nd Vice-President, Mrs. F. G. Charters; 3rd Vice-President, Dr. Jessie Boyd Scriver; 4th Vice-President, Miss Elsie Watt; Recording Secretary, Miss Mary Creber; Assistant Recording Secretary, Miss Joan Marsters; Corresponding Secretary, Mrs. J. G. Brierley; Assistant Corresponding Secretary, Miss Agnes Morton; Hon. Treasurer, Mrs. Andrew Swan; Assistant Treasurer, Mrs. J. J. Harold; Member of the Board (ex officio) Miss Zerada Slack. Convenors of Committees:—Membership, Mrs. M. W. MacKenzie; Library, Miss Ruth Murray; Tea, Miss Jean Kyle; Alumnæ News, Miss M. T. Young; Representatives:—Local Council of Women, Mrs. Andrew Swan; University Settlement, Miss Margaret Smyth.



A SOLAR ECLIPSE IN 1900

This photograph by Professor E. E. Barnard shows the sun's corona during the period of totality. A total eclipse of the sun provides what is perhaps the most awe-inspiring of Nature's phenomena.

The Total Eclipse of the Sun on August 31, 1932*

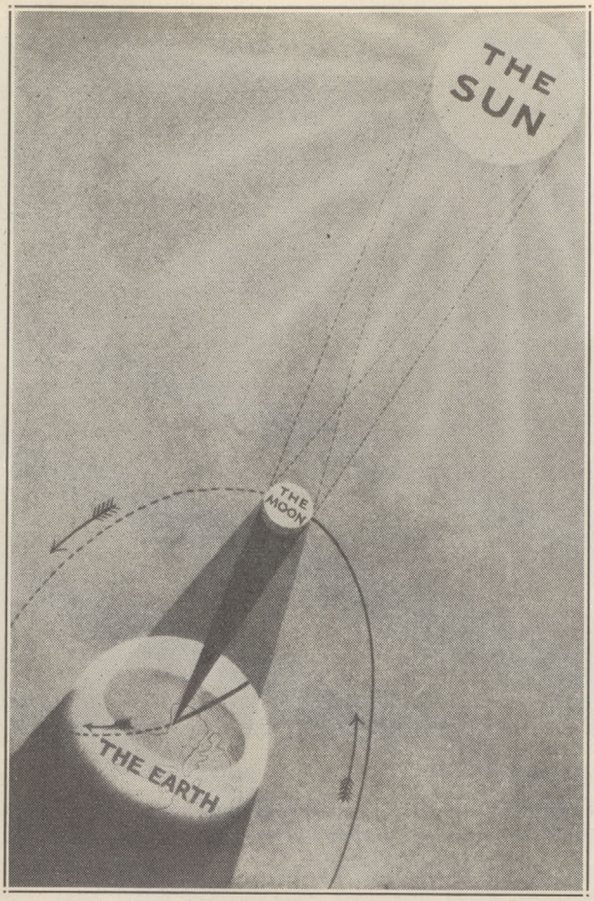
By A. NORMAN SHAW, F.R.S.C.
Professor of Physics, McGill University

AT 3.24 (E.S.T.) in the afternoon of August 31, 1932, we shall, under favourable conditions, experience one of Nature's most striking demonstrations. The moon will come exactly in line between us and the sun, and there will be a total eclipse, which, under favourable weather conditions, will be visible from the eastern and central sections of Montreal for the only occasion during the lifetime of anyone present. Incomplete or partial eclipses of the sun have, indeed, been observed from here occasionally, but they are relatively uninteresting compared to the impressive and awe-inspiring phenomena associated with a complete solar eclipse.

In ancient times, an eclipse of this type affected men's minds extremely; whole tribes were thrown into a panic and usually they were seriously influenced in policy and action by the superstitious interpretations of the event by their priests and sages. Often it was regarded as presaging some terrible disaster; and at one time, even in Rome, it was blasphemy punishable by law to talk of eclipses as natural occurrences. Strange rites and penances were followed on these occasions by almost all races of mankind. In China, for example, it was thought by the illiterate that a huge dragon was trying to eat the sun, and accordingly great noises were made with drums and kettles to frighten the monster away. On the other hand, the learned Chinese were better informed and provide us with some of our earliest records; there is, indeed, a record of an eclipse in China which occurred over four thousand years ago, when two astronomers were put to death for failing to predict it! Another version of the story states that they predicted an eclipse

*Radio talk at the Provincial Hour, December 11, 1931, 8.00-8.15 p.m.

McGill University Library



A TOTAL ECLIPSE OF THE SUN

This diagram, adapted from Phillip's "Splendour of the Heavens," illustrates what happens when a total eclipse occurs.

which was invisible, and this was the source of the amusing old ditty:—

> Here lie the bones of Ho and Hsi
> Whose fate was sad though risible,
> Being hanged because they could not spy
> The eclipse which was invisible.

According to the Annals of the Bamboo Books, a work written three hundred years before Christ, this episode was of sufficient importance to involve a detachment of Imperial forces, which were sent by the Emperor specially to punish Ho and Hsi, but the actual fate of these unfortunate astronomers is not clearly indicated. In any case, it is definitely evident from the records that Chinese astronomers of that early date had sufficient knowledge to attempt the prediction of eclipses.

It is, perhaps, interesting to remind ourselves what is really happening when an eclipse of the sun occurs. Behind the moon, or any other object exposed to the sun, there is a long region of complete shadow shaped like a cone from inside which the sun is invisible, and when the moon comes exactly in line between us and the sun, the surface of the earth sometimes intersects the end of this cone, producing on the ground a large elliptical region of shadow from which the sun cannot be seen.

In the coming eclipse this shadow—as its western edge passes through Montreal—will be, at a given instant, about 103 miles across for its larger diameter, and nearly 54 miles for its smaller one. On account of the relative motion of the moon, and the rotation of the earth, the shadow will be travelling past Montreal at nearly 2,000 miles per hour, but at the centre of the shadow in any fixed locality, it will take 102 seconds to pass,—that is, the maximum duration of complete interception of direct light will be 102 seconds,—and this time will scale down to a mere instant at the edge of the path. The whole eclipse, however, from the first apparent contact of the sun and moon, to the final return of full illumination, will last from 2.14 p.m. to 4.30 p.m. (E.S.T.).

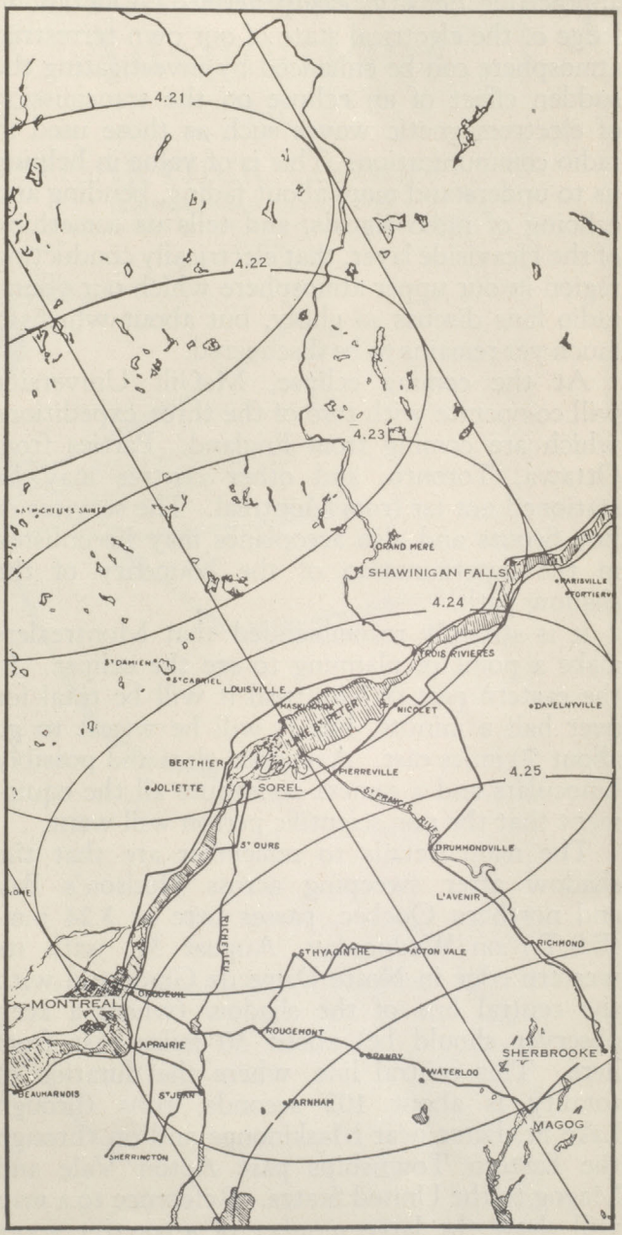
The rarity of this type of occurrence can be understood when we compare the size of the main shadow (or umbra) with the area of the earth, and recall that the total number of eclipses of all kinds, that is, both of sun and moon, and visible anywhere on the earth, can never be greater than seven in any one year, and may be only two. On the average there is a total eclipse at any one place on the earth's surface about once every 360 years, but the actual figures vary tremendously,—for example, two were seen within a few years in Spain recently, while on the other hand no total eclipse was visible in London, England, between 1140 and 1715, a period of 575 years. The exact path of the next eclipse near Montreal, after 1932, has not yet been calculated accurately, but it will be at least 200 years before we have another one here, although in 1954 there will be one that passes over the extreme north of Canada, and again in 1963 one will pass over Alaska and the North-West Territories.

Sometimes when the sun, the moon, and the earth are in line, the earth is beyond the tip of the cone of shadow, and so the apparent size of the moon is insufficient to obscure completely the whole disc of the sun, and we can see an outer ring of the sun's body round the moon; this is called an *annular eclipse*. The term *partial eclipse* refers to the cases when only a part of the sun (or the moon) is cut off from view. In the case of an eclipse of the moon it will be remembered that the earth comes between the sun and the moon, producing a much larger cone of shadow, and entirely intercepting the sun's light

which is essential for the illumination of the moon. Partial eclipses of the sun or moon can be seen from wide areas on each side of the path of the main shadow—for example, the coming eclipse of the sun may be seen as a partial eclipse over 2,500 miles from the path of totality. If the moon had been only 140 miles less in diameter, or if its distance away from us had been about ten per cent. greater, we would have only partial or annular eclipses of the sun. A time will probably come when this will be the case, due to the recession of the moon; and still further on in future ages when the moon is expected to approach the earth again, there will be more frequent eclipses visible over increasing areas.

What is there in the observation of an eclipse to attract the attention and interest of the general public? Why was it that scores of thousands went miles up or down Great Britain to see the total eclipse of 1927? The answers are to be found in the unique and thrilling character of the phenomenon, coupled with its particularly important scientific value. When we are in the complete shadow, that is, during what is called the period of totality, the appearance of the sky round the obscured sun is one never to be forgotten, and it can easily be understood why enthusiasts will cross continents and oceans to view it. In one brief moment the stars spring into visibility and shine as in the evening, and round the jet black intervening moon there glows softly, from away beyond it, the glorious corona caused by the outermost parts of the sun's atmosphere. This glowing halo of white or silvery hue is sometimes threaded with brilliantly coloured prominences, which consist of masses of incandescent gases shot out from the surface of the sun sometimes for thousands of miles. Many other interesting things will be noted, such as the appearance of the main shadow as it sweeps across the country towards the onlooker, with peculiar preliminary fluctuations which are not yet fully understood. A strange hush falls over the landscape preceded by the conspicuous action of the birds and animals preparing rapidly and excitedly as though for night; while the sky and clouds near the horizon may assume unusual and beautiful shades which outrival those of the sunset or the sunrise.

The astronomers and other men of science find a multitude of important things to do in the brief interval of totality, which involve in many cases laborious weeks of rehearsal and months of preliminary calculations and laboratory work. The times of arrival and positions of shadow boundaries are measured with the highest precision, in order to check our calculations of the movements of the solar system and in particular of the moon, which is notoriously wayward in its path. With the aid of the spectroscope which analyses light into its component vibrations, it is possible to interpret the light signals which the distant atoms in the sun are continually emitting. In this way, we can determine the chemical composition of the sun's atmosphere, and even obtain information about its electric and magnetic conditions. The spectroscopic study of the distribution of light at and near the rim gives us



THE PATH OF TOTALITY ACROSS QUEBEC

This map, from the Journal of the Royal Astronomical Society, shows the position the shadow will occupy in consecutive minutes with adjustment to Montreal Daylight Saving Time.

data about the structure of the sun, the meaning of sun-spots, and the state of the outer regions of its atmosphere. The bending of light from distant stars which are nearly behind the rim of the sun, has been of particular interest in recent eclipses because it provides one important test of the validity of part of Einstein's theory of relativity.* Modern physics has been greatly influenced and aided by information of this kind.

Furthermore, the topography of the moon at its rim can be examined to particular advantage, and the non-existence of a lunar atmosphere of appreciable density, easily verified. Our knowledge of the electrical state of our own terrestrial atmosphere can be enhanced by investigating the sudden effect of an eclipse on the transmission of electromagnetic waves such as those used in radio communication. This is of value in helping us to understand more about fading, bending and echoing of radio signals, and tells us something of the Heaviside layer, that electrically conducting region in our upper atmosphere which our young radio fans discuss so glibly, but about which so much yet remains to be discovered.

At the coming eclipse, McGill University will co-operate with two of the three expeditions which are coming from England. Parties from Ottawa, Toronto, and other centres may be stationed not far from Montreal. The services of Boy Scouts and also aeroplanes may be enlisted in the determination of the boundary of the shadow path.

It is strongly recommended that Montrealers make a point of planning to see the eclipse. In the eastern part of Montreal it will be total for over half a minute, but it will be wisest to go about 50 miles east. A smoked glass and possibly binoculars and a camera constitute all the equipment that the non-scientific person will want.

The main details to remember are that the shadow after sweeping across Hudson's Bay and northern Quebec, passes here at 3.24 p.m. (E.S.T.) on Wednesday, August 31, with its western edge in Notre Dame de Grace and with the central line of the shadow (where a keen observer should be) about 50 miles east from here. This central line, where the duration of totality is about 102 seconds, runs through Lake St. Peter near Maskinonge and on through the Eastern Townships past Acton Vale and Magog to the United States. Reference to a map will show the large number of attractive spots on this line. The residents of Sorel, Drummondville, St. Hyacinthe, Sherbrooke, Magog, and those neighbouring towns which are within about ten or twenty miles of the central line, will not need to travel at all, except to avoid possible smoke from factories.

We are, of course, at the mercy of the weather, but the chances of a clear sky in the direction of the sun are estimated to be slightly better than 50%. Many visitors from distant parts will plan to spend a holiday here over Labour Day which comes on the following Monday, and all of these should be advised to include the eclipse. Several parties have already made preliminary arrangements to come from England with the scientific expeditions, and arrangements for them to see something of Canada at the same time are being made.

In conclusion, Montrealers and the people of this province in general should be urgently reminded that this may truly be an opportunity of a lifetime to observe one of the grandest of astronomical spectacles.

*On account of the poor field of stars behind the sun at the next eclipse, this interesting observation cannot be made to advantage.

Additional Note

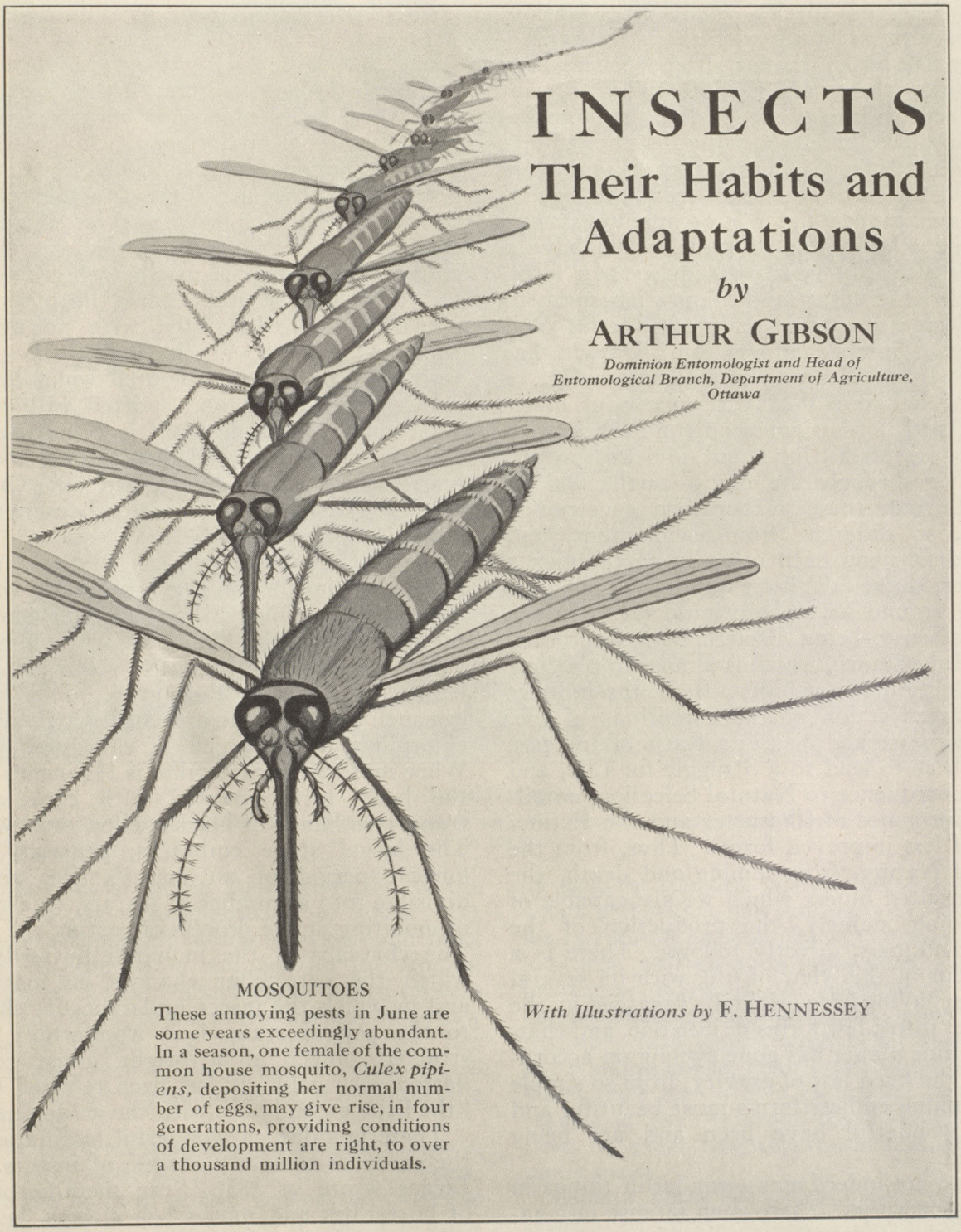
(April 14, 1932)

From information based on the latest data for the movements of the moon, Prof. J. Weir has re-calculated the position of the edge of the shadow in Montreal, and the times of contact.

The extreme W.S.W. limit of the elliptical total shadow sweeps along a line which will cross Sherbrooke Street, Notre Dame de Grace, Montreal, near Hampton Avenue, with a speed of 32 miles a minute. The greatest diameter of the region under totality at the time of mid eclipse at McGill University will be 102.9 miles which gives the distance away of the eastern edge of the path; the least diameter of the shadow, measured along the track, will be 53.3 miles at that time.

At McGill University the partial phase of the eclipse will commence at 3h. 14m. 11s. (Daylight Saving Time); totality will commence at 4h. 24m. 16s. and end at 4h. 24m. 52s., a duration of 36 seconds; and the last contact will occur at 5h. 29m. 48s. At the nearest point on the central line (see map) the duration of totality will be just over 101 seconds; at Sorel, for example, it will be 100 seconds. At Sherbrooke, totality will commence at 4h. 25m. 4s. (D.S.T.) and last for 93 seconds.

The apparent elevation of the sun at the time of the eclipse will be nearly 32° in Montreal.



INSECTS

Their Habits and Adaptations

by

ARTHUR GIBSON

Dominion Entomologist and Head of Entomological Branch, Department of Agriculture, Ottawa

MOSQUITOES

These annoying pests in June are some years exceedingly abundant. In a season, one female of the common house mosquito, *Culex pipiens*, depositing her normal number of eggs, may give rise, in four generations, providing conditions of development are right, to over a thousand million individuals.

With Illustrations by F. HENNESSEY

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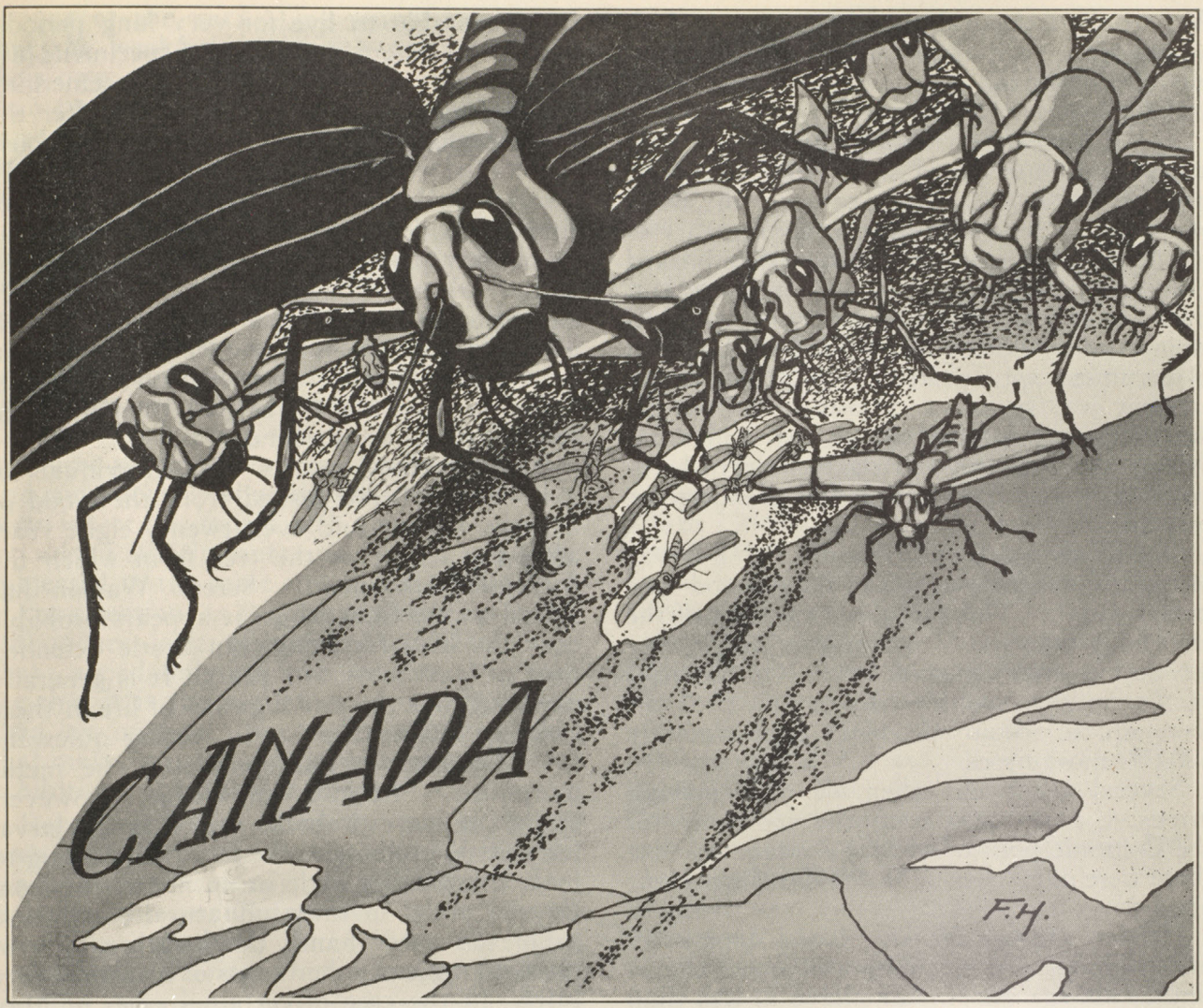
IN the realm of nature, the insects occupy a most important place. It is not known how many different kinds of insects there are in the world, but it is known that over 600,000 have been actually studied. Probably as many more different species await classification. Compare these figures with the vertebrates—mammals, birds, snakes, frogs, fishes, etc., of which there are 36,500 living species described, and we at once realize the largeness of the place insects occupy in the animal kingdom. In such a vast array of insect life we find all sorts and sizes, from the tiniest, only seen under the microscope, to species like the atlas moths of India which have a wing expanse of nearly 10 inches. In form, specialized structure and colouration, many of these creatures are truly wonderful and command intense admiration.* Darwin has said, "It is interesting to contemplate a tangled bank, clothed with plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us. These laws, taken in the largest sense, being Growth with Reproduction; Inheritance, which is almost implied by reproduction; Variability, from the indirect and direct action of the conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinction of less improved forms. Thus, from the war of Nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. There is a grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one, and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved."

There are indeed many wonderful things in the insect world. There is an intense fascination in the study of insect life-histories; their habits are of much interest; their structures are remarkable; the colours and beauty of many of them are beyond description; their strength is amazing; their powers of song excite surprise, and so on. May I, for a brief period, direct attention to some of these remarkable insect objects and their characteristics, which demand our admiration.

Insects, as is well known, have definite stages through which they pass, developing finally to the adult form. In the majority of cases there is first the egg or embryonic stage; secondly, the caterpillar, maggot, or grub stage, depending upon the order to which the species belongs and which is the growing period; thirdly, the pupa or chrysalis stage, the resting condition; and finally the perfect or sexually adult stage, which is usually winged. Take for instance, the well-known butterfly, the monarch. This butterfly, with an average wing expanse of about four inches, has tawny-red or fulvous coloured wings heavily marked with black and spotted with white. The wing membrane itself is colourless and transparent, but is clothed with fine coloured scales which are easily rubbed off. On one species of silk worm moth, Leesewentock counted upwards of 400,000 scales. The monarch butterfly lays its eggs on the common milkweed plant. The eggs, somewhat conical in form and variously ribbed, forming a beautiful fretwork of raised lines, are white in colour when laid, but soon change to yellow, and just before hatching to dull gray. The empty egg shell furnishes the first meal for the young caterpillar, after which it eats the leaves. When mature the caterpillar is 1¾ inches long, the body being marked with conspicuous transverse bands of black, yellow, and white. The larval stage embraces, generally, the longest period of an insect's life, and is divisible into a number of instars, as a result of moulting or the process of casting the skin. The chrysalis of the monarch butterfly, to which the caterpillar changes on maturity and in which the insect undergoes its change to the perfect state, is a wonderfully constructed object of a bright green colour dotted with gold. It has been referred to as "the little green house with the golden nails."

There is indeed a wonderful fascination in the study of the early stages of insects. As Jaeger wrote in 1856, "the metamorphosis of butterflies and moths has always been a subject of interesting contemplation and of profound analogical reasoning, and has ever been considered the true type of man's existence here, and his brighter and happier life hereafter. In the most ancient times, it

*Excerpts from the Somerville lecture delivered in Moyse Hall, McGill University, Nov. 5, 1930.



GRASSHOPPERS

Insects destroy 125 million dollars worth of crops in Canada each year. Hordes of grasshoppers will appear in Western Canada in 1932.

probably gave origin and strength to the belief in the transmigration of souls. . . as also to a thousand fabulous stories and fairy tales, in the same manner as the annual casting of the skin of snakes, by which process that reptile appears every spring in a new dress of bright and glittering colours, has given rise, even in the remotest antiquity, to the idea of regeneration and endless life hereafter."

The underwing moths of the genus *Catocala*, favourites with students of the lepidoptera, have the habit of resting during the day-time on the bark of trees, similar in colour to their forewings. When in such position the brilliant hind wings, strikingly banded with red, yellow, white, or black, are hidden. Thus it is extremely difficult to detect them on the tree trunks. There is one species, not uncommon in eastern Canada, which has black front wings and which has the habit of resting, so far as I know, only on charred stumps. Much has been written about this phenomenon of protective resemblance, particularly in the tropics where certain butterflies, when at rest, resemble dead leaves, while other insects like the walking-sticks, counterfeit sticks or twigs. Bates once met with a caterpillar during his travels in the Amazons which startled him from its exact resemblance to a small venomous snake.

Certain kinds of insects have remarkable powers of reproduction. Grasshoppers or locusts deposit their eggs in pods or packets in the ground, and in years of abundance as many as 2,000 eggs to the square foot have been found in western Canada. An old Arab legend reads: "A locust unto Mahomet said:

'We are the army of the great God; we produce ninety-nine eggs; if the hundred were completed we should consume the whole earth and all that is in it.' "

The European corn-borer, the most costly insect ever introduced into North America from Europe, has been present in fields of corn in western Ontario to the number of 400,000 to the acre. In 1926, we estimated that if the ruined corn areas were put together, they would make a block sixty miles long and twenty miles wide. In 1927 the United States Government appropriated $10,000,000, which amount was spent in certain states, in the destruction of infested corn crops and other "clean up" measures to reduce the corn-borer population and thus retard the spread of the insect.

One of my associates obtained 3,218 larvae of mosquitoes from a piece of flooded sod nine inches square. This gives us some idea of the enormous numbers of mosquitoes which may develop in small areas of water. On the basis of the findings mentioned, a small pool ten feet square could produce approximately 600,000 mosquitoes.

Several years ago when we were making intensive observations on the bionomics of the Colorado potato beetle, we estimated that there were more than 1,000,000 beetles present per acre.

Herrick's recent estimate based upon careful weighings and calculations showed that a single cabbage aphis might have in less than a year, in central New York, where there is food enough, so many descendants that, although each one weighs little more than a milligram, the ponderable mass of the whole would weigh more than 822,000,000 tons. In pounds, this would be 1,644,000,000,000. Estimating the human population of the world at 2,000,000,000 and the average weight at the greatly exaggerated figure of 150 pounds, we have as the total of human weight 300,000,000,000 pounds. In other words, the plant lice descended from one individual of one species in a single season would weigh more than five times as much as all the people of the world. Such a catastrophe, however, is never likely to happen for the very good reason that Nature herself fortunately builds up a sequence of parasites and predators and these, with conditions of climate and disease, in good time reduce the infestation to normal numbers.

Not only are many kinds of insects capable of reproducing in enormous numbers, but some are able to live for very long periods. We have a record at Ottawa of specimens of a cerambycid, or long-horned beetle, emerging from rafters in an attic nine years after the logs were sawed and five years after the house was built from the air-seasoned lumber. My associate, Dr. Swaine, reared specimens of similar beetles from rafters of a barn near Ormstown, Que. The grubs were observed to be boring in the sap wood of the timbers 16 years after the barn had been erected. These insects are not known to oviposit in dry wood. There is every reason to believe, therefore, that the grubs had been living in the timber all these years.

A. S. Packard relates that individuals of a Longicorn beetle issued from the wood of a table, twenty and even twenty-eight years after the felling of the tree from which the furniture was made. Sereno Watson has stated a case from which it appears probable that the life of a Longicorn beetle extended over at least forty-five years. It is generally assumed that the prolongation of life in these cases is due to the beetle resting quiescent for long after it has completed the metamorphosis. Recent knowledge, however, renders it more probable that it is the larval life that is prolonged; the larva continuing to feed, but gaining little or no nutriment from the dry wood in these unnatural conditions.

On the other hand, the length of life of certain stages of other kinds of insects is very brief. In the case of certain species of May flies, the sub-imaginal stage is of variable duration and there is, furthermore, some correspondence between the time spent in this stage and the duration of life of the imago. Thus the change into the imago may occur only a few minutes after the sub-imago has emerged from the nymphal cuticle. In such cases the life of the imago is a fugitive one, death taking place the same evening or early the following morning. Numerous swarms of May flies mature and leave the water about the same time, and it is not an unusual sight to see thousands of them in mid or late July near many of our rivers, lakes, and bays.

The muscular power of insects is a subject which has attracted considerable attention. On one occasion, I watched for over half an hour, two small ants about ⅛ inch in length pull a caterpillar half an inch long over small pebbles, pieces of twigs, and leaves of grass for a distance of about a foot. The operation was almost human in character, most of the time each end of the caterpillar being seized

by one of the ants. One writer has stated that the weakest insects can pull five times their own weight, while the average is more than twenty times. Another, that a housefly can carry a match, to equal which a man would need to carry a timber 35 feet long and as large around as his body. Comstock, writing about the muscular power of insects, says that "the comparative contractile force of muscles of the same kind depends on the number and thickness of the fibres, that is, on the comparative areas of the cross-sections of the muscles compared; that this sectional area increases as the square of any linear dimension, while the weight of similar bodies increases as the cube of any linear dimension; and consequently that the muscles of the legs of an insect one-fourth inch long and supporting a load 399 times its own weight, would be subjected to the same stress, per square inch of cross section, as they would be in an insect 100 inches long of precisely similar shape that carried only its own weight. We thus see that it is the small size of insects, rather than an unusual strength of their muscles, that makes possible the apparently marvellous exhibitions of muscular power."

Regarding sounds made by insects, it has been stated that probably the first sounds made by land-animals, on this earth, were made by insects. Before ever birds sang or even frogs croaked, insects had developed a chitinous covering, the segments of which, rubbing together, produced sound waves. One of the most remarkable sounds made by an insect is the shrill noise made by the male cicada, which may be heard for at least a distance of one mile. The organs which produce this noise comprise a pair of shell-like drums or timbals situated at the base of the abdomen. These drums vibrate by means of special muscles. The cicadas are abundant in August and are popularly known as dog-day harvest flies. In view of the fact that the sound is made by the male only, an old Greek poet wrote about the prevailing silence of the female:

"Happy are cicadas' lives
For they all have voiceless wives."

The group of insects known as bark beetles have received marked attention by entomologists, not only because of their prime importance economically, but also in view of the remarkable excavations made by their grubs or larvae. The adult beetles, small dark-coloured insects, cut entrance tunnels through the bark of spruce and certain other trees and from the ends of these excavate tunnels in the inner bark, or between the bark and the wood surface, in which they lay their eggs in small niches cut along the sides. The grubs which hatch from the eggs also cut galleries more or less at right angles to the egg-tunnels and generally complete the killing of the tree by girdling it from top to base. The student of these insects has found that a distinctive form of the galleries obtains with many species, in other words, a close examination of the tunnels will, in general, determine exactly the species of bark beetle which made them. Under cage conditions our officers have found that from 500 to 750 beetles could easily kill an ordinary sized spruce tree. In one tree which was specially studied, 1,041 tunnels were counted and 8,802 beetles obtained.

The four-winged flies, known as leaf-cutter bees of the family *Megachilidæ*, cut circular pieces from the leaves of rose and other plants, with which to build their cells. Each cell is stocked with pollen and nectar after which an egg is laid in each. Food is thus provided for the larva which hatches from the egg. In the making of each cell it has been estimated that there are at least 30 pieces of foliage. One observer who watched a bee making its cells, has stated that it took 20 days for it to make 30 cells and provide them with the requisite quantity of pollen and nectar. Some species of bees make nests similar to those of the leaf-cutter bees, except that the cells are formed of pieces of petals of flowers. The petals of *Pelargonium* (geranium of gardens) are often used for this purpose.

Insects Costly

How many people realize the tremendous struggle which almost every country is waging against injurious insects? The average individual little realizes the extraordinary power of destruction which these small creatures develop when they appear in outbreak form, the comparative ease with which they devastate fields of growing grain, orchard trees bearing promising crops of fruit, forest and shade trees, or even dried products kept in store. It would seem that little belonging to man escapes injury from some kind of destructive insect. Our field, garden, and orchard crops, our stored products—grain, dried foods, fur, etc.—collectively are reduced

in quantity every year to the value of many millions of dollars. Added to this, millions of dollars' worth of timber is annually lost as a result of the work of wood-borers and other forest insects. Then, too, there are the various kinds of mosquitoes, black-flies, houseflies, bedbugs, etc., which affect the health of man and some of which even spread such diseases as malaria, typhus, tuberculosis, and infantile paralysis. Live stock, also, suffer untold agonies from the bites of bloodsucking flies, and others as well, some of which enter their bodies, living in the stomach and other parts of the animal. And so the struggle goes on. Is it any wonder that high authorities are predicting that man's next great war will be the war against the insects? The annual devastation in Canada from insect enemies, in the aggregate, is well over $100,000,000.

Canada first appointed an official entomologist in 1884, but the real development and expansion of the work did not begin until about 1909, when the finding of the dreaded brown-tail moth in shipments of nursery stock from France necessitated the passing of legislation in 1910, giving the Department power to inspect plant products entering Canada, and to take such means as were considered advisable to prevent the spreading therein of insect pests already established. This necessitated the establishment of research laboratories and plant inspection stations in various regions of Canada. The headquarters staff and divisional organization is at Ottawa. Sixteen permanent research laboratories have been established and ten plant inspection stations. In addition, temporary field laboratories are maintained during the summer months.

The outbreak of grasshoppers in western Canada during the years 1919-1923 necessitated expenditures by the Governments of Manitoba, Saskatchewan, and Alberta of sums exceeding $1,750,000. Over 72,000 tons of poisoned bait, consisting chiefly of bran, sawdust, molasses, poison (white arsenic or Paris green), and water, were spread over infested fields. Grasshoppers are readily attracted to such poisoned bait and destroyed in enormous numbers. As a result of the very successful campaign conducted during the above years, it was estimated that crops worth $80,000,000 were saved to the farmers.

Regarding the destructive group of insects known as cutworms, much original investigation with respect to these pests has been effected by Canadian entomologists. The value of poisoned baits for the control of certain kinds of these caterpillars has been demonstrated over and over again. During recent years research conducted in the Prairie Provinces, particularly in Alberta, has progressed to the state where it is now possible to foretell destructive outbreaks of the pale western cutworm and the army cutworm, two very serious pests, both of which, in the past, have destroyed large acreages of wheat and other grains.

Wireworms, soil-infesting insects which attack the roots of cereal plants, are very important pests in the larger grain producing areas, particularly in Western Canada. During recent years, they have caused losses to prairie crops amounting to millions of dollars. In view of these losses, special observation stations have been established for the purpose of studying the factors of present day farm practices which result in the increasing abundance of these insects and the losses therefrom. The results of these investigations should, within a comparatively few years, be responsible for definite annual savings amounting to very large sums.

The various kinds of white grubs so destructive to field crops have, for a number of years, been given particular study, more recently in the province of Quebec. As a result, it is now possible to predict the year when the grubs will be specially destructive. With a knowledge of the life cycle of these insects, the practical entomologist is now able to give sound advice to farmers resident in infested areas as to the agricultural practices to adopt.

Following close research looking to the control of the destructive European cornborer, conducted in association with the Ontario Department of Agriculture, the recommendations for control enforced by provincial legislation have resulted in reducing to an important degree the numbers of the pest in the heavily infested districts. As a consequence, a re-establishment of the grain corn industry in the province of Ontario is taking place.

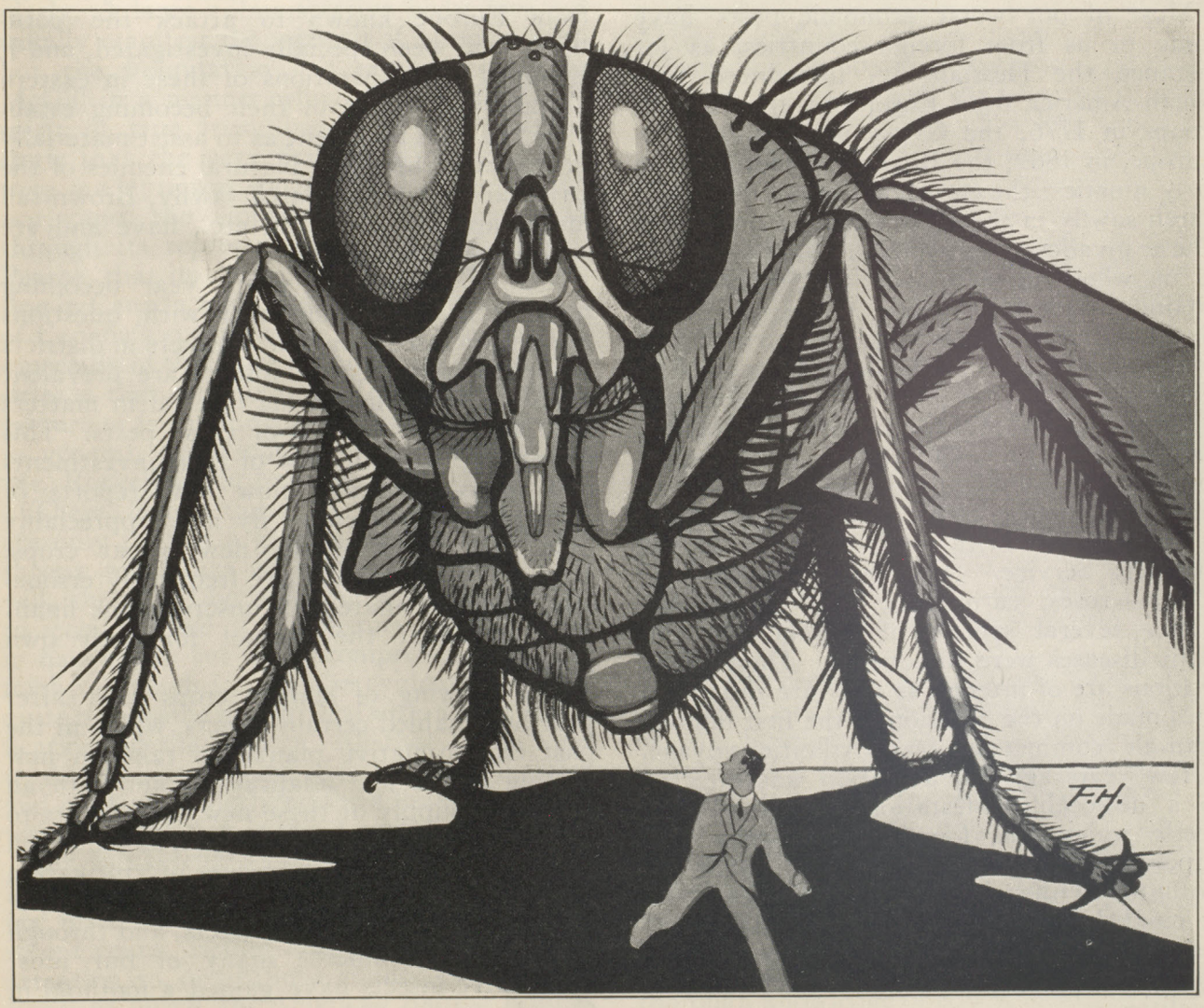
In Eastern Canada the apple maggot has caused very serious losses in apple orchards. As a result of entomological investigation, however, the growers need have no further fear so far as this pest is concerned. Badly infested orchards have been properly sprayed and otherwise treated, and within two or three years, paying crops have been secured. Object lessons of this nature in infested districts

have certainly demonstrated the value of applying scientific principles to their industry.

The very destructive insect, known as the pear psylla, has received special study during recent years. Previously, owing to the presence of this pest, growers in the Niagara district of Ontario had found it almost impossible to grow marketable crops of pears. As a result of investigations, it was demonstrated under large orchard conditions that a certain oil spray destroyed this insect and made possible the growing of excellent crops of pears.

Serious outbreaks of destructive bark beetles have occurred in British Columbia. A policy of co-operation between Dominion and Provincial services was adopted and control work commenced and continued each year until these outbreaks were controlled. The methods employed have been to cut and burn, as nearly as possible, all the beetle-infested trees in the infested areas; to require the burning of all yellow pine logging slash, and to utilize wind-falls before the emergence of the beetles contained in the bark. More than 50,000 beetle-infested trees have been cut and burned in this control work, at an approximate direct cost of $100,000. This bark beetle control work has resulted in the saving from total destruction of stands of yellow pine worth more than $6,000,000.

Owing to the ravages of the western cedar borer in certain areas in British Columbia, observations looking to the control of the pest were incepted. As a result of this investigation, there will undoubtedly be an appreciable saving to the pole industry. Extensive strength tests of poles infested by



THE HOUSE FLY: An Important Enemy of Man.

the borer have been made at the Forest Products Laboratory, Vancouver, in co-operation with the Dominion Forest Service. Proof has been secured that there is no material reduction in the strength of a large majority of poles infested by the borer.

During recent years, airplanes have been used in insect control, particularly for the purpose of distributing poisoned dusts. During the last few years, the Department of National Defence (Civil Government Air Operations) has assisted our entomologists by providing air machines and pilots to distribute poisoned dust over forested areas ravaged by the spruce budworm and the hemlock looper, the flights for this purpose having been made in both western and eastern provinces. In the case of such foliage-eating insects, the distribution of poisoned dusts over the infested forest by means of airplanes seems to offer more hope of control than any other method.

Most of our worst economic pests have come to us from foreign countries, as for instance the Hessian fly, introduced into North America from Europe by the Hessian troops in 1776; the Gypsy moth, also from Europe, in 1869; the Brown-tail moth in the early nineties; the corn-borer about 1910; the Larch sawfly in the early eighties; and so on. These invaders from foreign countries came to us when nursery stock and other plant products were not subject to inspection by Government officials. A recent instrument in introducing insects is the airplane or airship. Upon the arrival of the *Graf Zeppelin* from Germany at the United States Air Station, Lakehurst, N.J., on October 15, 1929, inspectors of the Administration made the customary examination of the passengers' baggage, in co-operation with representatives of the Customs Service. On three bouquets of flowers—roses, carnations, and chrysanthemums—several species of insects and two plant diseases were discovered. These interceptions are of interest as they are the initial ones made on the occasion of the first lighter-than-air commercial trans-Atlantic voyage. A few years ago our attention was directed to a noticeable infestation of a dermestid beetle which was found in umbrella ribs imported from Germany by a dealer in Toronto. Other interesting examples could be cited, but these indicate how pests which may become of considerable economic importance are liable to be introduced into new localities.

The Canadian plant inspection service may well be considered a preventive service in that under its organization millions of plants and plant products from foreign countries are closely examined on arrival for insect pests and certain diseases. Foreign countries are realizing that our inspection service is reaching a high state of efficiency and, as a consequence, during recent years, there has been a decided improvement in the nature of plant products brought into Canada.

A form of control which is receiving considerable attention, not only in Canada but also in most countries where applied entomology is being developed, is the biological method of pest control, or in other words, the introduction and encouragement of natural enemies. In Canada, we have at our Belleville, Ont., laboratory, reared millions of specimens of imported parasites and liberated these in areas where the destructive insect pests were abundant. Species of parasites from Europe known to attack the corn-borer have been specially investigated, and it is hoped that liberations of these in eastern Canada will result in their becoming established to such an extent as to assist materially in reducing the pest. Natural enemies of the Oriental fruit worm, larch sawfly, Brown-tail moth, and Gypsy moth, etc., have and are still being investigated.

Men of finance are every year becoming more and more concerned with questions relating to insect control. Bankers in districts in which outbreaks of insects are prevalent are showing an increasing interest in matters relating to the control of these pests. This is not surprising in view of their investments and loans. We all know how reports of damage by the Hessian fly may appreciably affect the price of the new wheat crops. Reports of this nature are frequently erroneous, being circulated by unscrupulous financiers to affect the market for their own purposes.

The growing of similar crops year after year has enabled certain insects, which in the past fed on native plants, to take on new feeding habits and adaptations and with an abundant supply of these new food plants to increase in enormous numbers. The reduction of forested areas for purposes of cultivation has affected the numbers of birds and other animals which prey upon insects, and through agencies of commerce many of our most destructive insects have gained a foothold in Canada without their natural enemies and are causing very serious losses.

The Rockefeller Benefactions

By H. E. MACDERMOT, Med. '13

THE following paper is one of a series appearing in *The McGill News* on certain outstanding benefactors of our University. It is probably not widely enough realized how much McGill owes to the beneficence of the Rockefellers, and it will therefore be proper to add some account of this debt to what has already been told of other benefactors of the University. It will not be possible, however, to convey by mere statements of gifts an impression of the extent to which the Rockefeller Foundation has interested itself in Canadian university progress generally, and, as we like to think, in that of McGill particularly. A large administrative body does not usually manifest the warmth of a personality, but the Foundation has extended help to McGill in a manner which has engendered a spirit of true friendliness. It was in that spirit that the very first offers of assistance were made; it was soon after the close of the war, and the Foundation made it clear through its representative, Dr. Richard M. Pearce, that its desire to help medical education in Canada was quickened by a recognition of Canada's contribution to the struggle, and especially of the share of the Canadian universities in that contribution. In a sense it was a gesture of friendliness from the United States in general, made concrete and effective by Mr. Rockefeller in particular.

These benefactions to McGill, however, are only part of a general scheme of philanthropy which has an impressive history. It will, therefore, be a fitting acknowledgment to recount some of this history, especially as it has never yet been comprehensively set forth; although it must be evident that it is quite impossible here to deal with all the ramifications of the subject. All that I can hope to do is to give some idea of the principles and methods underlying the administration of what is actually a stupendous trust.

Mr. Rockefeller's interest in education is of long standing, but the colossal dimensions of his gifts have been attained only within recent years. Before 1902 he had devoted his attention to institutions connected with the Baptist Church, the American Baptist Education Society being the medium through which he contributed to education generally; the University of Chicago, for example, was one of the institutions established by this Society, with Mr. Rockefeller's assistance. As time went on, however, he began to feel that even this large and excellent organization did not give him the scope of action he desired. The stream of his activities needed a wider outlet than he could find in any existing organization, religious or otherwise. He had evidently realized this for some time, but it was not until 1902 that he created an incorporated body, known as *The General Education Board*, whose object was "the promotion of education within the United States of America, without distinction of race, sex, or creed."

Here was an object of the first magnitude, one which might satisfy even his varied aims. The charter of the Board allowed it to employ its resources "in supplementing the income of established institutions of learning; in cooperating with state and local authorities as well as with private organizations; in undertaking educational experimentation along new and hitherto untried lines, etc.," Mr. Rockefeller's name never appeared on its list of members. He chose for his purpose, however, and with the greatest discrimination, a number of men of a high order of capacity—Walter H. Page was one—and with only the most general indications from himself left it to them to interpret his ideals of beneficence in education. Heavy responsibilities were involved, and much was demanded of the disinterestedness of the members, for their work brought them into contact with both private and public agencies.

The first definite objective which the Board set before itself was the assistance of education in the Southern States. Conditions there constituted a problem of great urgency, and the way in which the Board dealt with it forms a story worth relating, both for its inherent interest and also because it illustrates so exactly the principles by which the Board was guided, and its methods of following them out.

First of all, it was essential to have a thorough knowledge of educational conditions in the South. This information was acquired

by means of surveys of each State, and the results of these were condensed into a series of reports. These now form valuable historical material. By this means the Board reached the conclusion that it could not from its own resources supply all the financial help required for the building up of a system of good public schools, which was admittedly the most pressing need in the South. It was felt, indeed, that any such direct help would be of a mischievous nature. The South needed the schools, but such institutions should represent the efforts of the community as a whole. Nothing speaks more eloquently for the wisdom of the Board than its recognition of and respect for this fundamental principle.

The Southern people's attempts at better educational conditions were being almost completely frustrated by the backward economic state of the country. There was much private effort and special taxation, but inadequate administration rendered only a small amount of money actually available, with the result, as summed up in the report of the General Education Board, that "A well organized state system, conducted by properly qualified officials efficiently supervizing comfortable schools in charge of trained teachers during a term of sufficient length, did not exist in any Southern State." This was not too severe an indictment in the face of such conditions as existed in Alabama, for instance, where the average salary of white teachers was $151.84, and of coloured teachers $95.53; or in South Carolina where the pay was $195.28 and $79.47, respectively. The average throughout the United States then was $516.00. The per capita expenditure on school children ranged from $3.38 in North Carolina to $7.43 in Louisiana, while in the country at large it was $15.08. The school term also varied greatly. In Georgia the term averaged 5.2 months; in Mississippi a 4-month term was required by law; in Tennessee the term varied from 55 days in one county to 145 in another.

What effective developments *could* be expected from people whose earnings averaged $150.00 annually, as was the case in some of the agricultural districts of the South? If, however, some measure of prosperity could be brought about, then it might be possible to improve the educational conditions; and the problem seemed capable of solution, since the land in general was fertile. What was lacking was a scientific knowledge of agriculture, and the Board accordingly set itself the task of introducing improved methods of farming.

It was decided to do this by education of the farmer himself, rather than by teaching agriculture in the common schools, where there were no teachers of agriculture, and where the results could only be very slow in appearing. A year was spent by the Secretary of the Board in visiting agricultural colleges, for guidance as to methods of teaching agricultural methods, Macdonald College at Ste. Anne de Bellevue and the Ontario Agricultural College at Guelph being amongst those consulted, and then it became necessary to decide on the best way in which to approach the farmer. At this time it happened that the U.S. Department of Agriculture was engaged with the problem of the depredations of the boll-weevil in the cotton industry, and its representative, Dr. Seaman Knapp, was teaching the farmers in Texas how to deal with the pest. Not only that, but he was showing them how by better methods of cultivation they could increase their cotton crop even if they were attacked by the weevil.

The Board saw its opportunity. If Dr. Knapp could teach farmers how to increase their cotton production under such a handicap, he should be still more successful in helping farmers whose only difficulties arose from ignorance of good farming. Dr. Knapp was quite willing to carry on his demonstrations on general farming (with the financial support of the Board), and it was felt that here at last there had been introduced the thin end of that wedge whose base was to be the support not only of prosperity but of better education.

The success of these farm demonstrations is a story in itself, as fascinating as the story of any well conceived, well executed achievement can be. It is too long to be told here. All that can now be said of it is that it was as a result of Dr. Knapp's farm demonstrations that there began in the South that transfiguration of economic conditions which it had been the purpose of the Board to bring about. The Board steadily adhered to its policy of helping by stimulation and well-timed initial expenditures rather than by large sporadic gifts. This is clearly shown by the total expenditures on these demonstrations each year. The first appropriation of the Board, in 1905, was $7,000.00. At that time the Government was devoting $40,000 to demonstrations in connection with the boll-weevil. The next year the Board appropriated

$30,900 for the farm work, and increased this each year, until in 1914 it gave $252,000.00. But this was only a part of the total expenditure on this work. Each year saw a steady increase in the money given from "other sources,"* which meant the Southern people themselves, until in 1914 they were paying almost fifty per cent. of a total annual expenditure of nearly $1,200,000.00.

Now came the less spectacular but far more difficult work of stimulating the educational forces to a corresponding state of energy, the resources for which had been so greatly enriched. Here again the Board had to consider the best methods of approaching local educational affairs. It was not only material deficiencies which had to be faced. In some States there were laws which completely blocked any change or expansion; for example, the provision that there should be common schools for teaching the elementary branches of education *only*, and, again, that the State Department of Education could not support or supervize public high schools, nor could rural districts create and sustain them. "The universities had no adequate knowledge of, or influence over, the schools; the schools were commonly too powerless to improve themselves."

It is true that there were stirrings of growth here and there, chiefly due to the efforts of the state universities in co-operation with other agencies. But there was no sustained leadership, and it seemed to the Board that the most immediate invigoration would be derived from the guidance of trained specialists in secondary education. These men would be distributed to work with the various educational bodies, and after a peaceful penetration of local bodies, would eventually marshal all the available forces for the concerted action which would eventually lead up to the establishment of a secondary school system.

Neither the state departments of education nor the state universities were able to pay for such men, however, and the Board thereupon stated its willingness "to make appropriations to the several state universities for the salaries and travelling expenses of a professor of secondary education." These men were to be regular members of the university faculty, and their work was "to ascertain where the conditions were favourable for the establishment of high schools; to visit such places and endeavour to organize public high schools in accordance with the laws of the state; to endeavour to create a public sentiment that shall permanently sustain such high schools, and to place the high schools under such local leadership as shall give them intelligent and wise direction."

It was characteristic of the policy of the Board that these men, whom it had been instrumental in bringing in, became members of the university faculties, and were answerable to these alone. There was no dictation from the Board, nor even suggestions as to the lines along which the work might be carried out. The Board was satisfied to provide the funds which would enable well qualified men to work out their problems as they saw best. There was room, too, for much advice, since no one situation presented the same problems as another. In one place "the law was fairly favourable, in another fatally obstructive, in another passively permissive."

Success followed, as it was bound to follow, vigorous, organized, and sustained efforts. Naturally, developments were slow-maturing and not as easy to detect as in the case of the farming. Still, within less than ten years advance could be reported. Important legislative gains were made, not all of them perhaps to be attributed directly to the efforts of the Board, but few of them free from some trace of its influence. High schools, which at the beginning of the century were almost non-existent in the South outside of a few towns, began to appear and increase rapidly. Enrolment of pupils kept pace with the increase in schools, and buildings were improved or created afresh.

By 1929 the Board felt justified in concluding that it saw:—

> Many evidences of progress greater than was thought possible when they aided a few significant movements in the formative period. The wisdom of working through the regularly constituted agencies in public education, and of strengthening the sense of responsibility of the Southern people has been amply justified, not only in the vast expenditures of public tax funds which have been hastened, but in the steadily improving relations between the races as they have worked together for the solutions of their problems.

This attenuated reference to the work of the General Education Board may serve to indicate the methods followed by it in supporting education. When we turn to Mr. Rockefeller's gifts to medicine, we meet with the same general procedure. It may be

*These did not include large Government grants.

recalled that his interest in medical affairs had been largely stimulated by one of his closest advisers, Mr. F. T. Gates, whose enthusiasm had been roused by reading Osler's Textbook of Medicine. The effect of this book was to impress on Mr. Gates the fact that there were large gaps in medical knowledge (this was in 1897) regarding disease, and he began to dream visions of what could be done if Mr. Rockefeller's resources were applied to the bridging of these gaps. He was able to inoculate Mr. Rockefeller with his ideas, and the outcome eventually was the creation in 1901 of the Rockefeller Institute of Medical Research, whose objects were:—

> To conduct, assist and encourage investigations in the sciences and arts of hygiene, medicine and surgery, and allied subjects, in the nature and causes of disease and the methods of its prevention and treatment, and to make knowledge relating to these various subjects available for the protection of the health of the public and the improved treatment of disease and injury.

But his efforts to develop education regarding disease did not stop here. The field of preventive medicine soon attracted him, and he began by initiating a campaign against hookworm disease. His first step in this was the following letter, addressed to a group of prominent men:*

> For many months my representatives have been inquiring into the nature and prevalence of "Hookworm Disease;" and considering plans for mitigating its evils. I have delayed acting in this matter only until the facts as to the extent of the disease could be verified and the effectiveness of its cure and prevention demonstrated. . . .
>
> Knowing your interest in all that pertains to the well-being of your fellow-men and your acquaintance with the subject, I have invited you to a conference in the hope that it may lead to the adoption of well-considered plans for a co-operative movement of the medical profession, public health officials, boards of trade, churches, schools, the press, and other agencies, for the cure and prevention of this disease. If you deem it wise to undertake this commission, I shall be glad to be permitted to work with you to that end, and you may call upon me from time to time for such sums as may be needed during the next five years for carrying on an aggressive campaign, up to a total of one million dollars.

*Dr. Wm. H. Welch, Dr. Simon Flexner, Dr. Chas. W. Stiles, Dr. Edwin A. Alderman, Dr. David F. Houston, Mr. Walter H. Page, Dr. H. B. Frissell, Mr. John D. Rockefeller, jr., Mr. Fred. T. Gates, Mr. Starr J. Murphy, Dr. P. P. Claxton, Mr. J. Y. Joyner.

This was the beginning of the formation of the *Rockefeller Sanitary Commission for the Eradication of Hookworm Disease*, which later became the *International Health Board*, a departmental agency of the Rockefeller Foundation. Dr. George E. Vincent, former President of the Foundation, has pointed out that the relief of a disabling malady, prevalent throughout areas inhabited by nine hundred million people, is sufficiently important in itself. But the campaign had other effects quite as important. Control of the disease meant in the first place education of the people in public health work, and when that began to take effect the rest of the programme was comparatively easy. The main facts about the disease were easy to understand and to demonstrate. Even the most illiterate could be shown the ova of the parasite under the microscope, and could be told how the larva from eggs deposited in the soil burrowed its way through the skin into the blood, which carried it to the lungs, whence it ascended into the throat and then descended into the stomach and intestines, where it became the depressing and devitalizing guest whose effects were so painfully familiar to those in tropical climates. He could be shown the adult worm, or the larva itself, under the microscope, although at least one "hard-boiled" gentleman was encountered who refused to admit his belief in the squirming object he was peering down at. "I go to the cinema," he said, "and there I see lions and tigers, but they are not really there!"—a toughness of scepticism enough to discourage a hookworm itself.*

The anti-hookworm demonstrations may well be said to have sown the seeds of faith in preventive medicine.

Later on, with the development of the International Health Board, similar campaigns were undertaken against malaria and yellow fever, the latter work being done entirely outside of the United States. In both of these the work has been monumental in scope. What has been done by this organization towards the eradication and control of these diseases can never be estimated in any set terms, but it may well be regarded as one of the largest undertakings of preventive medicine. It has also been the entry of

*In a personal communication Dr. Alan Gregg says: "This story I reported as it actually happened to me. It was an old Brazilian farmer to whom I was showing a recently hatched hookworm larva under the microscope."

another steadily advancing wedge of education, for the hookworm and malaria work has in many places continued as part of all-round public health activities.

Mr. Rockefeller's visions by this time were growing to their fullest height. So far he had concerned himself with education and medicine in the United States alone. Now he wished to extend to other countries "the spread of scientific knowledge," and thus there came into being the *Rockefeller Foundation*, with its chartered object of "promoting the well-being of mankind throughout the world." Mr. Rockefeller's initial endowment of this was one hundred million dollars, an amount to which large amounts have since been added.

But research and treatment of disease mean proper training of workers, and that means medical schools and public health training, and all the endless equipment these involve. The Foundation, therefore, found it necessary to set up a Division of Medical Education. It was through this that Canada, along with practically every other country in the world, was brought into contact with the beneficence of the Rockefellers. Medical education provided a philanthropic opportunity, which was exceptional both in the extent to which financial aid was required, and the value of the results to be expected from it. But once more it was evident that no organized effort could be made to help medical education in general until enough information on the subject had been collected beforehand. No one had ever surveyed the whole field before. It could only be done by study at first hand, and that meant travel and inquiry unprecedented in extent. This was carried out by Dr. R. M. Pearce, who had been born in Montreal in 1874. Beginning with trips to Brazil and other South American countries in 1916, 1917 and 1919, the following visits were made:

England, Belgium and Holland in the winter of 1919-20; Canada in the spring of 1920; China, Hong-Kong, Indo-China, Japan, Manchuria, the Philippine Islands, Siam, Straits Settlements, and the Malay Peninsula from September, 1920, to December, 1921 (this period included a stay in Peiping as acting director of the Peiping Union Medical College); Brazil in the spring of 1922; Germany, Poland, Austria, Hungary, Czechoslovakia, Switzerland, France, Belgium, Holland, England, Scotland, and Wales from September, 1922, to April, 1923; England, Scotland and Wales again in the autumn of 1923; England, Denmark, France, Italy, Egypt, Syria and Turkey, in the spring of 1924; France (including Algiers), Belgium, Italy and Germany from November, 1924, to March, 1925; Haiti and San Domingo in December, 1926; France, Belgium, Yugoslavia, and England in 1928; and numerous visits to various parts of the United States.

The information gathered in this way served to bring out still more the immensity of the task involved in aiding medical education. It was a period of intense agitation, of dislocation, of uncertainty and shifting of policy. Political and economic changes had gravely affected many universities by impoverishing their resources and personnel. In some countries, especially those of Central Europe, economic life itself seemed to be failing, and it was quite difficult enough merely to preserve existing institutions, much less to begin fresh undertakings. In only a few instances was the problem simply that of reorganization.

This was not all. The teaching of medicine itself was in a ferment. Much new wine was being added to not very new or elastic bottles, and readjustments and patchings were continually being made, with no very stable results. Not that methods had to be entirely recreated: that might have been easier to do. But the retaining of fundamental elements and ideas, whilst fitting in fresh knowledge and admitting new points of view was a problem which presented great complexity—and presents it still.

Canadian universities, of course, were not exempt from the difficulties that beset others. Assistance from the Foundation began in 1920: McGill, and the Universities of Toronto, Dalhousie, Montreal, Manitoba, and Alberta, all received aid in various ways—in general medicine, public health, pathology, the biological sciences, experimental surgery, pædiatrics, mental hygiene, child study, the social sciences, and by scholarships of different kinds. In our own University the aid took the form of endowments made contingent upon the securing of new funds for buildings. Thus grew the Biological Building, and the Pathological Building on Pine Avenue. Later on a grant was given for the development of the Department of Medicine, and this resulted in the establishment of the University Clinic. Then came a grant for the establishment of a child laboratory of the nursery type, gifts for research and experimental surgery, a grant for social science research, and, most recently of all, the endowment of a neurological institute. This last typifies (though no more than do the others) the methods of the

Foundation in the making of its gifts. It ascertained that at McGill, under the leadership of Drs. Wilder Penfield and Cone, there was being carried on neurological research of the highest quality. This work was still in process of development; but the Foundation discerned in it the promise of great accomplishment. A sum was therefore granted which has made possible plans for the wide development, under conditions which have been judged to be the most suitable in every respect, of research in the fields of neurology, neuro-pathology, and neuro-surgery. Simultaneously there were received for the same object pledges of further help from both provincial and private sources; an evidence of co-operation which was a most important factor in taking the decision to make this grant.

The following is a summary of the gifts to McGill:

Nov. 30, 1921	General endowment of Faculty of Medicine, contingent upon erection of new buildings for physiology, pathology and psychiatry (pledged Nov. 18, 1920)	$1,000,000
July 1, 1924	Endowment for University Medical Clinic	500,000
Mar. 11, 1925	Study of child life, with further grant in June 1930 (grants made by L.S.R.M. and Spelman Fund)	57,500
Jan. 22, 1929	Research and experimental surgery (spread over 4 years)	85,000
Dec. 10, 1930	Social science research (spread over 5 years)	110,000
April 13, 1932	Development of teaching and research in neurology	1,232,652

The policy of the Foundation towards a medical school, as declared by Dr. Vincent, is along the following lines: First, the Foundation must have a request from the school for a survey by representatives of the Division of Medical Education. Next, if favourable action is recommended, a plan is formulated which has the complete approval of the local authorities and leaves them full responsibility. Thirdly, the Foundation engages to contribute a part of the sum needed for the project, provided the rest is secured from other sources. Finally, when the conditions are complied with, the Foundation redeems its pledge and thereupon terminates its relation with the undertaking.*

The relation between the Foundation and a medical school may vary from the making of an official visit to large gifts for buildings or endowments; from the sending of information about buildings, organization, and equipment, to the provision of books and laboratory supplies, temporary resident fellowships, the lending of experts, the training of teachers, and the making of appropriations for specific purposes. If all such relations are taken into account, it will be found that the Rockefeller Foundation has been in touch with medical schools in every part of the world.

To follow these widespread activities is to be brought into contact with much of the world's history during the last thirty years. It is also to see with what wisdom the distribution of gigantic sums has been carried on. The proper disposal of such wealth was far beyond the capacity of any one man, and Mr. Rockefeller fully realized this, but the responsibility was shared in no haphazard manner. Mr. Rockefeller has created an immense benevolent force, well controlled, wisely guided, and hampered by no limitations as to race, creed, or country.

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*Full details of the Rockefeller Foundation activities in Canada may be found in the Canadian Almanac for 1929 and 1930.

McGill Women's Club of Vancouver

The McGill Women's Club of Vancouver sponsored a successful recital by Marion Copp, contralto, assisted by Kenneth Ross, accompanist, and Dorothy Rodgers, pianist, in the Hotel Vancouver, on February 8. Thanks to the kindness of the artists in giving their services, and to the large patronage, a substantial sum was raised for the fund for the assistance of women students at the University of British Columbia.

The Club was delighted to have as its guests, at the April meeting, Dr. Nicholson, former Registrar of McGill, and Mrs. Nicholson. Dr. Nicholson gave a much appreciated address on world conditions in general, and McGill conditions in particular.

During their stay in Vancouver, Dr. and Mrs. Nicholson were guests of honour at a McGill tea at the home of Professor and Mrs. Lemuel Robertson, of the University of British Columbia. A large number of McGill graduates were present, and were delighted to renew acquaintance with Dr. Nicholson.

On May 14, the Club brought the year's activities to a close with an afternoon bridge at the Shaughnessy Golf Club, at which Mrs. A. H. Sovereign (Ellen Ellison, Arts '11), who is leaving this summer to make her home in Dawson, Y.T., was presented with a leather handbag. She will be greatly missed in Vancouver, and especially in the McGill Women's Club.

Ravenscourt School, Winnipeg

An Experiment in Education

By GRACE MOODY YOUNG, Arts '20

FOR twenty years now we have been hearing a good deal about the emergence of new principles of education, and about experiments within and without the present system. It was in 1909 that John Dewey began his Laboratory School to see what could be accomplished without benefit of time-honoured class-room regimen. Before that, Bedales School in England had been working out practical projects for children—making use of child-initiative—giving freedom in place of restriction. The movement has grown, and has taken many forms to suit varied needs. From the body of experience which has accumulated we may assemble the essence, the first principles which seem to have justified themselves in practice.

We believe that the greatest gain to the child comes from self-actuated work, and that training in initiative is a great need; that freedom with responsibility is the best condition of moral and intellectual growth; that children need experience with actual material, and opportunity for varied expression; and that the most wholesome and effective motive for work is the social motive. The tendency of the old schools was to over-emphasize competition at the cost of successful social living. The new school sets up situations which provide constant practice in co-operative living, and encourage activities in which the child can make a personal contribution to a group enterprise. It is considered important that the child should feel himself an accepted and respected member of a society which he understands.

It was in the hope of being able to work out some of these ideas, and in the desire to begin a national experiment in education, that a school for boys was opened at Ravenscourt (the old home of the late Mr. Stewart Tupper), in Winnipeg, in the autumn of 1929. The work was begun with thirty boys, who were limited to those between eight and twelve years of age. In this its third year of life, there are eighty boys enrolled, and next year the original "Ravens" will have their first tilt at Matriculation examinations. The school is run on the Country Day School plan for the boys who are not boarders. That means they are with us for the whole day—lessons, mid-day dinner, games, and study.

If the reader will come on an imaginary visit, we shall look in and see how the time is spent, and how our theories may or may not work out in practice.

From Morning Prayers on, the "Ravens" are themselves actively responsible for the carrying on of the school day. The Scripture Lessons are read by the senior boys, each taking a turn with the masters; and there has been more than one experience of a well-known passage suddenly being given a new and fresh meaning through the interpretation of an imaginative boy. At the moment, hymns are being treated as part of the School's choral and literary training. The "old favourites" of no special beauty have been discarded and the boys have thrown themselves with great fervour into the learning of some of the more difficult sacred songs. The plan of letting monitors take charge of our daily life commences here, with hymn-book monitors, who look after repairs to the books as well. Later we shall find a bath-room monitor supervising the use of paper towels before lunch, and a milk-and-biscuits monitor doling out the rations after games, with the implacable justice of a company adjutant.

From Prayers to Lunch, with twenty minutes' break for outdoor play, the boys are doing lessons. In the matter of the actual curriculum, as written down in time-table form, we have not been able to depart from the system of set periods for classes, nor to discard the time-honoured labels of "Reading, 'Riting, 'Rithmetic." But class periods are lengthened, and in the Lower School especially, Projects are made great use of, and have proved a success. The lengthened period gives a leisurely feeling, and a chance for engrossing activity, which mean much to a boy who has something to "get on with."

A Project among the eight-year-olds has dealt with their native city, and all manner of gay charts and maps of Winnipeg in the early days have been produced, showing the original eight forts. In the Second Form a Western Canada Project has produced a fund of drawings, cut-out pictures, and various material illustrative of the doings and lore of the Prairie Indians. A book is being compiled by joint effort from the material which each boy collects, and great is the pride of Joe when his essay and wigwam are chosen by class vote, or of Bill at the acclamation of his arrow-heads. At the moment, the book is bound in handsome purple wrapping paper, but it aspires to better things.

As we pass the door of the Third Lower, strange thudding sounds of strife are heard, and loud manly tones resound. It sounds like a mutiny of sorts, and you may well think "Surely this is unruly youth in need of check." Tactful enquiry reveals that the Ballad of Sir Valentine and Sir Ursine is being enacted; and Sir Valentine, mounted on his charging steed, is at deadly grips with the bear.

Next door a class is singing lustily "Quand Trois Poules vont aux Champs," and from the accompanying sounds we judge that "La première va devant," at a right smart pace. Noisy? Yes. But it is "purposeful activity" surely, without which there can be no worthy life. And the "drawing-out" environment is superseding the pouring-in atmosphere.

In the Upper School one cannot co-ordinate work into projects as easily as in the Lower. The curriculum, as set down by Boards of Education, must be more sedulously regarded, as Matriculation requirements must be thoroughly mastered. In spite of this, we can pay a visit to the English Group of the Second Upper some Friday afternoon, and find much to interest us. They are, for the nonce, a lecture club, and, looking in, we find the master lolling dreamily at the back of the room. A twelve-year-old chairman sits, watch in hand, and a censor sits beside him, ready to bring down his mallet on the table should the lecturer be guilty of any misdemeanour in his English syntax or usage. There have been ten-minute discourses on "Coal in Manitoba," "Sub-Arctic Expeditions," "Olympic Games." As we enter, a Canine enthusiast is delivering a concise and graphic exposition of just how and why to dock the tail of a cocker-spaniel; he makes use of chalk and blackboard, and there before us, joint by joint, is the tail in question . . .

The Upper School, too, provides busy editors and business managers for the weekly *Croak*, and the Magazine published once a term. From its members are chosen House Prefects and Games Captains.

"Yes," you say, "it all sounds very jolly and informal; but what of the boy who prefers *not* to enjoy singing French songs or preparing speeches for Oral English? Is there no such thing hereabouts as the lazy boy, or the persistently unresponsive member of a class?" And here I lead you to a green notice-board in the hall, on which hangs a long paper giving the School Grouping for the current fortnight. Each boy is given a mark and a grade based on his class-work for the two weeks, and he can see at a glance just where he stands. At the top of the list are the "King Ravens," with eighty per-cent and over to their credit. Next come the "Ravens," and at the bottom the "Crows," who fell below sixty per-cent in their efforts. Nor is their ignominy left to depend on their own capacity for shame. It is the privilege of the "Crows" to come for special help on Saturday mornings, and the general misfortune that they are debarred from playing on School teams in any of the sports. It is marvellous how a desire to play left wing and an ability to learn latin verbs can work together, and in direct proportion.

This academic conversation beside the notice-board is interrupted by the clanging of the lunch bell and a scampering of boys to the wash-rooms. A second bell and we find seats at the head table where we can watch the eighty boys file in.

The Symphony Movements which are put on the gramophone as soon as the first course is served, do, as one youthful author says, bring peace and quell the torrent of conversation, which needs something to restrain its crescendo.

A word of explanation about the use of "Stripes," for around the "Honour and Stripe" system is built the whole discipline of the School. A blackboard in the dining-hall shows three columns, one for each of the three Houses into which the School is divided. Competition is keen for the Inter-House Shield, which goes to the House gaining the largest number of Honours during

(Continued on Page 34)

To Melrose

(From Some Highland Soldiers)

"I shall always have a warm place in my heart for Melrose, because of the hospitality of its people."—Extract from a letter from an Officer in France during the Great War.

I

As we stand upon the Eildons'
Triple peaks and watch the glow
Of the sunset on the ridges
Of the Cheviots, down below
Darkness fills the Border valleys
And the evening breeze that blows
Tells of Border wraiths returning
Drawn by love for thee, Melrose.

II

Once again the Rhymer listens
To the linties in his glen,
And King Arthur, clothed in armour,
Stands beside us, wondering when
In his country's greatest danger
He will lead against her foes
All his knights from round their table
In those caverns near Melrose.

III

Michael Scott, the devil-cheater,
Lords of Douglas, Scotts and Hayes,
Haigs and Pringles, Border-chieftains,
Come to muse on other days:
Picts and Romans, grim moss-troopers,
Soldiers fresh from Flodden's close
March along forgotten bye-ways
In the hills around Melrose.

IV

Down the highway rides King David
With his queen to see their fane
Sleeping on in lovely sadness
With a charm that ne'er shall wane.
Shades of Bruce and Alexander
Rouse themselves from their repose,
While Cistercian brothers, pensive,
Pace the cloisters of Melrose.

V

'Neath the moonbeams, in the shadows,
Queens and ladies wait the while
Slowly moves a dim procession
From the choir along the aisle;
Minstrels wander in the woodlands
By the Tweed, and sing the woes
And the glories of thy oft-times
Wasted abbey, sad Melrose.

VI

Comes Sir Walter to the gateway
On the road to Bemersyde,
Where, beneath the heights, the circling
Red ravine falls deep and wide,
Closing in a ghostly abbey,
And the Tweed so softly flows
'Midst the trees, where saintly Cuthbert
Meets the monks of Old Melrose.

VII

We have rested in the bridge-way
On the march from Galashiels,
Where the Tweed with graceful curving,
Lights and shadows, gently steals
Through the narrow, wooded valley,
And anon, with laughter goes
Flashing over rocks and shallows
To the reaches at Melrose.

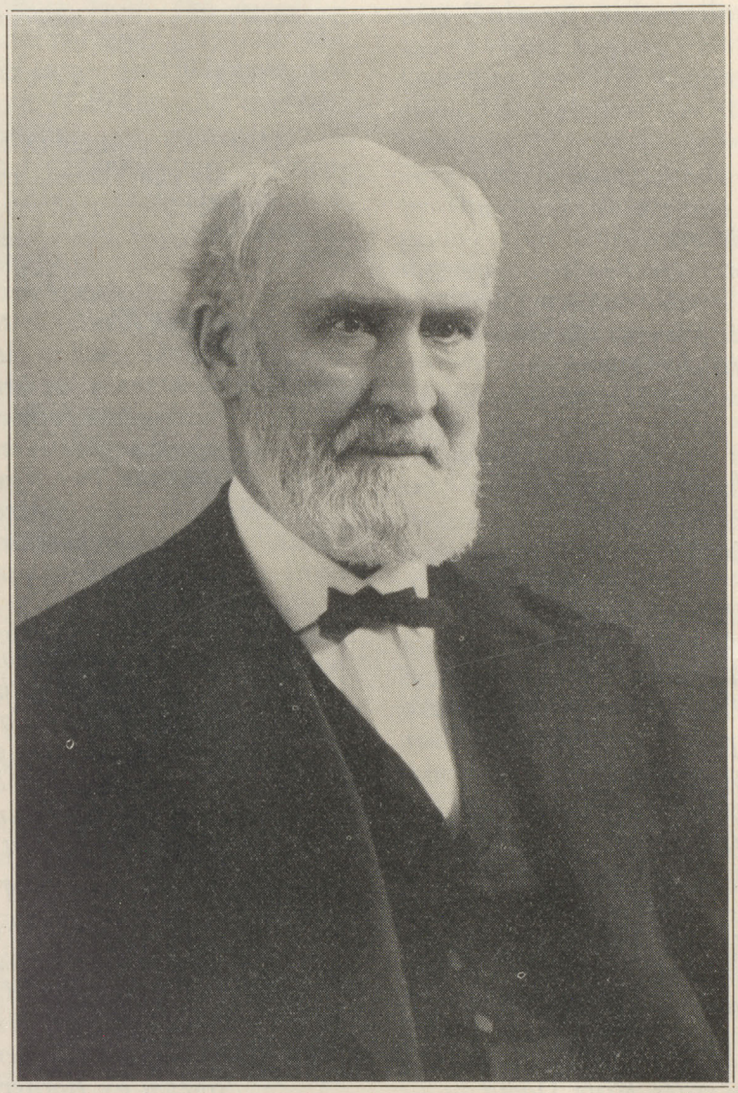
VIII

Yet, 'tis not for all thy legends,
Thy romance and history;
Nor for all thy varied beauties
That we have this love for thee:
'Tis because of Border kindness
Shewn by Border hearts to those,
Who awaited battle-orders
By the dingle at Melrose.

IX

And they come with kilts aswinging,
Who in France and Flanders died,
Roaming up and down the centre
Eildon's grassy, wind-swept side:
Round thy Cross they talk about thee,
Till a distant bugle blows,
Then they turn, and bless, and leave thee
To thy slumbers, sweet Melrose.

—R.R.T.



—Notman

SIR WILLIAM C. MACDONALD, 1831–1917

William Christopher Macdonald

By W. B. HOWELL, MED. '96

IN the year 1773 John Macdonald, eighth chief of the clan of Glenaladale, sold his estate and emigrated to Canada, bringing with him between two and three hundred of his retainers. He paid for their transportation and for their subsistence during the voyage; and provided them with all the clothes, provisions, and farming implements they would need during their first year. He took up a grant of 30,000 acres in the Island of St. John, now Prince Edward Island. During the first two years the crops failed, food ran short, and disaster impended. Macdonald chartered a ship in Boston, loaded her with provisions, and saved his followers from starvation. Nevertheless they were discouraged and wished to leave. But he was a hard man to beat. He bought live-stock for them and taught them how to farm. In time they became a prosperous and contented community. On the outbreak of the American Revolution, he went to the revolting colonies to use his influence to prevent the Scotch Highlanders there from rising. A less keen loyalty would have been excusable in a man whose father had been one of the first of the highland gentlemen who joined Prince Charlie in the '45, and who had fought at Prestonpans, Falkirk, and Culloden.

In 1811, John Macdonald died, a man honoured for his ability, energy, public spirit, and generosity. His son, Donald, was for some years president of the Legislative Assembly of Prince Edward Island. Donald Macdonald had three sons, the second of whom, born in 1831, was named William Christopher. This William Macdonald, when he reached the age of 23, turned his back on his native island and went forth into the world to seek his fortune. He was an unpromising entrant into the competition for worldly success, for, besides being physically small, and handicapped by modesty, he had neither money nor influence to back him. His education, such as it was, had been picked up at a country school and in Charlottetown. After a short sojourn in Boston, he came to Montreal, then a city of about 60,000, and went into business with one of his brothers, who is described in the directory of that year as an "importer and general commission agent."

In 1860 the two brothers started to manufacture tobacco under the title of Macdonald Bros. & Co. A few years later his brother dropped out of the business and William continued it alone, under the name of the Macdonald Tobacco Company. The business grew steadily. In 1865 William Macdonald was employing no less than 3,000 people. The demand for his tobacco grew until it was smoked and, disgusting to relate, chewed, from Halifax to Victoria, and from the Arctic circle to the United States border. It was known as "the tobacco with a heart" from the trade-mark, a piece of tin cut into the shape of a heart and fixed to each plug and package. No little country store, however remote, was without it. It became a necessity of life to miners, lumbermen, prospectors, farmers, cowboys, trappers, Esquimaux and Indians; and it was as popular in cities as in the country.

Macdonald's methods of conducting his business were characteristic. He never advertised. He dealt plainly with his customers and expected them to deal plainly with him. If one of them was slow in settling an account, his name was erased from Macdonald's books. Upon one occasion a man, who was a customer on a large scale, thought that his name would count for something in getting from Macdonald a subscription for a Methodist church. He was mistaken. Macdonald erased his name from the list of his customers. When people called to see Macdonald about matters in which he was not interested, he would put on his hat, walk out of his office, and not return until they had left.

His offices, which were in Notre Dame Street, near Place d'Armes, were small and dingy. He made no attempt to impress the public with the amount of business he was doing by having expensive mahogany office furniture and a large staff of underpaid, incompetent clerks. He lived before the days of the efficiency expert.

His aversion to the use of tobacco he never

concealed. He threatened to send one of his nephews, whom he was educating, back to Prince Edward Island if he did not give up smoking. The habit of chewing tobacco he called "filthy and disgusting."

Among Macdonald's peculiarities was an aversion to writing cheques. He always paid his bills in cash, no matter how large the amount. Like most men who have made great fortunes, he was very careful about small sums of money.

In time he found himself in possession of millions of dollars. But his millions wrought no change in the man himself. His tastes remained as simple and his method of living as plain, when he was old and a multi-millionaire, as they had been when he was young. He went his way, a thoughtful, unobtrusive figure, too indifferent to the opinion of his fellow-men to care to thrust himself upon their notice. He had no ambition to shine in society. Neither the head table at a public dinner, nor the seat of honour at a subscription dance, had even the slightest allurement for him. Lists of directors and governors, in which his name was not included, aroused in him no peevish feeling that he was not receiving the attention which was his due. He was not seen at fashionable concerts or at the opera. Clubs knew him not. For the adulation which is the due of the rich, he cared nothing. He did not even experience a thrill when he saw his name included in a newspaper list of prominent citizens.

Macdonald had all a Scotchman's respect for education. His own, he considered, had been an indifferent one. Cautious and unemotional as he appeared, his mind was full of admiration for the achievements of science, of faith in the possibilities of improvement in the human race, and of interest in young people. It was only natural, therefore, that when, comparatively early in life, he looked about for some cause deserving of interest and help he should have decided upon education.

There was a room on the ground floor of his austere, plainly furnished house in "Prince of Wales Terrace" which was known as the "library." The shelves were packed with magazines and reports. The tables, chairs, and sofa were heaped with them. There were few bound volumes. Here, standing at a lectern, he read for hours together in his untiring quest for information about the subject nearest to his heart. Here he interviewed people who brought him information at first hand. It was no slight ordeal for some of them, for the cross-examination was long and searching.

In that room he dreamed of a nobler alchemy than that by which the baser metals were to be turned into gold. The purpose of Macdonald's alchemy was to turn gold into happiness, not for himself but for young people. Education was to be his philosopher's stone. He gave away during his life-time twelve and a half million dollars. McGill University owes some of its finest buildings and the endowment of many chairs to his generosity. Macdonald Agricultural College, an affiliated institution, cost him $5,000,000. One of the kindest acts he ever did was to buy the Joseph property, which was situated where the McCord Museum now stands, and give it to the University. The land would have been bought for an hotel if Macdonald had not stepped in at the right moment. He felt that there were quite enough drinking bars in the town without having one practically on the College grounds. Not long after the erection of the McGill Y.M.C.A. building, Macdonald gave the money for the "Union." "Lord Strathcona and his friends," he said, "are putting up a building for the Christian young men of McGill. I want a building for *all* the young men of McGill."

The Medical Faculty never received any money from Macdonald during his lifetime. In his will, however, he left it half a million dollars.

Macdonald was the most methodical of men. There is in existence an old-fashioned letter-book which contains carbon copies of all the letters he wrote during the last 30 years of his active life. Not a little of the man's character is revealed in these letters: his benevolence, his courtesy, and his quiet humour. The handwriting and composition of the letters are excellent. He had learned to write letters before the introduction of the typewriter abolished the necessity of writing legibly, and when it was still the custom of business men to express themselves grammatically.

In this book are copies of laconic letters which accompanied gifts of hundreds of thousands of dollars. There is a letter to the secretary of an insignificant football club, which had elected Macdonald its honorary president. This clumsy attempt to get a subscription from him elicited nothing more than a courteous note expressing his regret that in view of the many demands on his

time he felt himself obliged to decline the honour.

There is a suggestion of acerbity in a letter he wrote to a French-Canadian Member of Parliament:

"Dear Sir,

"As your letter of the 10th inst. is written in French I cannot read it, and being marked 'private' it must not be handed to another to translate, therefore, I must ask you to be good enough to address me in English in order that I may understand what your wishes are.

"Yours truly,

"W. C. McDonald."

In a letter dated December 1, 1898, he wrote to Lord Minto declining the honour of knighthood. A day or two afterwards, finding that well-meaning, but unthinking, friends had pushed the matter so far that persistence in his refusal would appear as lack of respect to the throne, he wrote again to Lord Minto and accepted. The satisfaction to be obtained from a title must necessarily be in direct proportion to the extent to which the holder of it is sensitive to the opinion of others. Now this sensitiveness was left out of Macdonald's composition, so that the enjoyment he got out of his title must have been little or nothing. His first letter to Lord Minto was signed "McDonald," the second "Macdonald." In this second method of spelling he persisted for the rest of his life.

There is a letter dated June 20, 1893, and addressed to the late Sir William Osler, in which Macdonald says—"Inasmuch as the United States persist in carrying off the most valuable crop this country raises (viz, our men) without giving us any adequate return, I propose to adopt a beneficent mode of punishment and continue raising and educating a superior class of men, who will go and improve the standard of the inhabitants of that country until the standard is sufficiently high to admit of its being annexed to Canada." In another letter he says he has given up investing money merely for income, "other methods of using money proving more agreeable to me."

Macdonald seems to have inherited much of his grandfather's character. Both were able and energetic men, and were actuated by a strong feeling of public duty. In a cause which touched their hearts there was no limit to their generosity.

William Macdonald died on June 9, 1917, at the age of 86.

Letters to the Editor

LIFE OF LORD STRATHCONA

[*To the Editor*, THE McGILL NEWS]

SIR,—The article by Dr. W. B. Howell on the Life of Lord Strathcona, in your last issue, was a pretty piece of work, with all the enjoyable qualities that Dr. Howell's many contributions to your paper have led us now to take almost as a matter of course. If I may, however, have the space, I should like to point out an omission from this "Life" which would seem to me rather remarkable anywhere, but nowhere more so than in *The McGill News*.

Lord Strathcona's life had all the light and shade that ninety-four such years as his could have. No one would deny this. But as Dr. John Macnaughton says in his biography (incidentally I think one of the best biographies in Canadian literature) Strathcona's "investments in the Kingdom of Heaven were as cautious and well directed as his ventures with the Mammon of Unrighteousness." One of the most shining of the former was the foundation of the Royal Victoria College for the education of women, and the two hundred thousand pounds cash and the eighty thousand pounds represented by the buildings and site, left for this purpose, made up one of the larger single items in Lord Strathcona's will, and, like the ten thousand pounds and few acres of James McGill some years ago, it marks an epoch in the history of Canadian education. It was, of course, a memorial to the memory of Strathcona's best loved sister, Margaret, but it was also a progressive old man's blow for the still suspect higher education of women, and it also, of course, supplied McGill with its better half.

All this Dr. Howell omits. It does perhaps bulk less imposingly than the St. Paul Minneapolis Railway coup, or the exciting rescue of the C.P.R. by the Canadian government, and its building by Smith and his courageous colleagues. But that is only because the Mammon of Unrighteousness is fattening. In the long run, Strathcona's greatness is really a matter for the Kingdom of Heaven to decide and in the decision his broad-minded generosity to McGill and its women students will figure largely.—Yours faithfully,

T. W. L. MACDERMOT.

McGill University.

[*To the Editor*, THE McGILL NEWS]

SIR.—I have no excuse to offer for not having mentioned, in my article on the late Lord Strathcona, that he had founded and endowed the Royal Victoria College. The truth is I forgot that he had done so. Had I remembered, I should almost certainly have mentioned the fact. I say "almost certainly" because I was limited as to space; and chose, as far as I could, the incidents in his career which showed him to be different from the ordinary run of multi-millionaires. Education is one of the favourite objects of the ordinary multi-millionaire's beneficence; if we may, without irreverence, use the term "ordinary" when speaking of the very rich.

If, as Mr. MacDermot believes, the Kingdom of Heaven is to decide about Strathcona's merits, it

seems to me that what will weigh most in his favour will be his part in the founding of the Royal Victoria Hospital and his gift to the Medical Faculty of McGill University; for his Judge will remember the Good Samaritan.

I do not understand exactly what Mr. MacDermot means by his allusion to the Mammon of Unrighteousness. Does he use the word "fattening" in a transitive or intransitive sense? Is Mammon becoming fat, or making someone else so? And if he is making someone else fat, who is it? At the risk of implicating myself in this fattening process, I confess that I admire Strathcona more for the brains and courage that he showed in connection with the St. Paul and Minneapolis Railway, and with the Canadian Pacific Railway, than for giving away money. When a man with, say, ten million dollars, gives away a million of them, he parts with something he cannot use for any purpose which will add to his happiness. He need not feel that he is robbing his children. Nine millions will ruin them as effectively as ten.—Yours sincerely,

W. B. HOWELL.

17 Grosvenor Apartments, Montreal.

Ravenscourt School, Winnipeg

(*Continued from Page 28*)

the year. An Honour is represented by a green ticket, with details thereon filled in and signed by the master who gives it. It may be won for attainment in class, in games, or for special efficiency as a monitor. A stripe takes the hideous form of a bright yellow slip, with like places for details and signature. One may incur a stripe for any breach of law and order, slackness in class, or failure in a job assigned. A boy realizes by painful experience that when he comes late to school—or has his mittens put into the pound—or wastes his time in class—his shortcomings re-act, not on him alone, but on his whole House, endangering its chance of victory. When the School Grouping is posted, two Honours are awarded to a House for each "King Raven" it can boast. Larger number of Honours are also won through House victories in games, cross-country runs, and group enterprises, such as leaf-raking in the autumn and rink-shovelling in winter.

As we gather round the coffee-tray with the masters after dinner, the visitor may hear many anecdotes of how the House spirit works: How Smith, a House Prefect and a boarder, was overheard telephoning Jones before breakfast one morning to see to it that he arrived on time, as he had three stripes to his discredit: of how, last year, Hopper, a persistent ill-doer and collector of stripes, had been formally ostracized by a meeting of his House. No other would take him in, he being considered too great a liability. He had to be given his meals at a small serving table; and there he sat enjoying all the publicity which he craved until he had a surfeit. His gratitude had truly reformative effects when the Prefect of another House, and the one which was well in the lead at the time, came to the Headmaster, offering to take in Hopper and "give him a try!"

The afternoon programme includes Study Hall periods when preparation is done. Games come during the sunny hours of our short winter afternoons, and are followed by Milk and Biscuits at four o'clock. This arrangement of the afternoon is the Country Day School plan for including in the day's programme most of the advantages of a boarding school in a school where many of the boys sleep at home.

As the term progresses, one finds the evenings filling up with Clubs and Societies. "What—you back again?" we ejaculate, meeting young Screws in the hall, and it seems that the Mechanical Society is meeting and he has a paper to give on the Kiel Canal. On Wednesday nights our peace is sacrificed to the Orchestra, which is enthusiastically learning a new "number." On Thursdays the members of the Astronomical Society foregather on the snowy lawn with telescope to count the moons of Saturn, regardless of frosty toes; while within doors the editors of the weekly *Croak* are pounding typewriters. The amount of energy seems to be boundless; and thus engaged, boys find that the need for vicarious thrills via the movies is scarcely felt: Life is too full of a number of things—and too busy.

But like the tail of "Terrible John" this tale, too, can go on and on and on! For a summing up, one cannot do better than quote from James Elroy Flecker's essay on True Education:

"Ours shall be no ideal school for the ideal youth, but a place where hard work is done, and where boys are toilfully prepared for the difficulties of a modern world: yet where, too, we shall train many to understand and love the sweet pleasures of the senses. We even hope that a few of our scholars will be among the great . . ."

*Man and His Diet**

Illustrating Facts, Fads, and Fancies About Foods

By I. M. RABINOWITCH, Med. '17, D.Sc. '32
Director, Metabolism Department, Montreal General Hospital

MAY I, firstly, say that I am not insensible of the compliment which an invitation to address The Canadian Club carries; and I thank you most sincerely. Nor am I unmindful of my duty. As I was given my own choice of subject, it fell upon me to select a topic which would present some features of general interest and upon which I might offer some remarks worthy of your attention.

As I note our Dean, Dr. C. F. Martin, within a few feet of me, I must be very careful of what I say. A short time ago, our Principal, Sir Arthur Currie, had occasion to refer to public speeches by members of the University Staff. Sir Arthur then put it very succinctly when he stated that McGill professors might say whatever they liked, wherever they liked, providing they adhered to three conditions: they must know what they were talking about; they must realize that there are two sides to every story; and, lastly, they must not act as propagandists.

A newly-born baby does not have to be taught the principles of hydrostatics before it can be induced to take its food; and the first thing a child does with anything new is to carry it to its mouth, so as to find out whether it is, or is not, good to eat. The cost of food is one of the principle charges for operating the human machine. Loss of appetite ushers in the majority of acute illnesses; and a real cause for concern on the part of the physician is when his patient, during the course of an illness, suddenly and persistently refuses food. Food is so intimately bound up with human affairs, that I felt it would quite properly constitute a subject of pertinent interest.

The idea that "all is fair in love and war" is not without adherents and the struggle for existence, whether between nations on the battle-field or individuals in civil life is, in a biological sense, war. This war, either merely to exist or to maintain dividends or increase them, has made possible a condition which further emphasizes the gullibility of the average individual, particularly in matters of health. *Repetition is Reputation* seems to be the philosophy of some of the participants in this war; repeat a claim sufficiently often with respect to a given article and the average individual will purchase that article regardless of its intrinsic value to the exclusion of all others, be it a necessity or a luxury.

Gullibility makes possible the sale of a sweeping compound at seven cents a pound, though the basic saw-dust may be purchased for seven dollars a ton. A widely advertised toilet article sells for approximately twenty-five cents a fluid ounce. We use the same solution in The Montreal General Hospital, but for another purpose, and our chemical laboratories prepare it at a cost of about two cents a gallon. However, these are not matters of great import and do not concern the medical profession particularly. If milady believes that she can accomplish a certain result with the aid of a given cosmetic, because some Hollywood actress or the Queen of Roumania says so, that is entirely her affair.

There are other products which are more intimately related to health, but, here again, the responsibility of the physician is limited. For example, food contamination either from natural disintegration or addition of harmful preservatives is dealt with by departments of health and these departments, by their pure food and fraudulent advertising laws, help to protect the individual against a variety of harmful medicinal preparations.

There is another group of products with the properties of which the physician need not necessarily be familiar, as their use can do little or no harm, but a knowledge of them

*An address delivered at The Canadian Club, Montreal, April 18, 1932.

has its value. For example, if he knows the chemical composition of soaps, the physician can assure his patient that keeping "a little fairy in your home" of "that school-girl complexion" does not depend upon the use of any one brand of soap, in spite of "23,720 beauty specialists," the "signed comments of 73 leading dermatologists," and, I regret to state, the signed endorsement of one of our own profession—an editor of the leading journal of dermatology in the United States. If the physician is familiar with the chemical composition and bacteriacidal and deodorant properties of another well-known proprietary medicine, he will know that it is merely a mixture of thymol and small amounts of boric and benzoic acid; that $495.00 worth has the antiseptic properties of one cent's worth of corrosive sublimate; and that it is not a deodorant, but merely covers one smell with another. (Journal American Medical Association, July 4, 1925.)

I have cited these few examples merely to prove that repetition of claim can create reputation; the intrinsic value of the product is of secondary moment. The articles dealt with are, however, of relatively little importance. They may be important economically, but not from the point of view of health; though economics and health are not entirely disconnected subjects. Much more pertinent are the wide-spread recommendations with respect to a variety of food materials.

Contrary to custom, in dealing with these food materials, I wish to state my conclusions at the outset, and then give my reasons. Briefly, the conclusions are that given an ordinary every-day diet—a diet balanced by the individual's preference for quantity, variety, taste, and economy—it makes no difference what the healthy individual eats. On sitting down to breakfast, the great majority of people know little and care less, and need know very little and care less, about the ash content of their orange juice, the caloric value of bacon and eggs, or carbohydrate, fat, protein, vitamin, or mineral contents. Man may still heed the dictates of his instinct and experience, for, as I shall try to show, his experience has been a long and worthy one.

There is not at present the time, nor is this the occasion, to deal with diet in disease. Obesity—excess body weight—may possibly be regarded as a borderline condition and dealt with here. This, however, is too important a subject to deal with briefly. Suffice it to say, *en passant*, that, notwithstanding the many widely-advertised diets and cures, no two people can be given the identical treatment, either with respect to amounts or proportions of the various food materials. The general physical condition of the individual; age, sex, height, weight; and occupation and general habits are some of the necessary considerations. Following advertised diets has landed many an over-weight, but otherwise healthy, woman in an institution for tuberculosis; and many, with the use of a widely-advertised tablet, have accomplished the loss of fifteen or twenty pounds at the expense of an irreparably damaged heart and marked reduction of expectation of life.

Orange growers would have us believe that a large number of people are suffering from acidosis and that there are only two types of people—those who have acidosis and those who are bound to have it, unless they change their dietary habits; and, of course, prevention and cure lie in the consumption of large amounts of orange juice. To those not familiar with medical terminology, acidosis implies an acid reaction of the body tissues. The physiological factors which govern the regulation of the reaction of the body tissues are many, and their description is a long and complicated story, but I may tell you that, of all the mechanisms the human body possesses to combat disease, that which regulates the reaction of the body tissues—that which prevents acidosis—is one of the most efficient we know of. Except in prolonged starvation and in a few serious illnesses, acidosis does not exist.

One cereal manufacturer would have us do away with coffee. Is coffee to lead to deterioration of the human race? Life insurance companies, with their vast experience in mortalities and morbidities, might have some information on this subject. These companies may be in doubt about many matters, but they are absolutely certain of this fact: for every applicant accepted, they must, sooner or later, meet a death claim; and, if they are to prosper, they must postpone payment of that claim as long as possible. To postpone it, the applicant is investigated, not only with respect to his present health and past illnesses and the illnesses of those about him, but, also, with respect to usual habits. Habits, I believe, constitute what is termed the moral hazard. These companies, in order to prosper,

must be very alert; they pool their information and take advantage of every medical advance, but I believe they have, as yet, to ask an applicant—Do you drink coffee?

The dairy industries would have us flood our tissues with milk. Is milk an indispensible part of the adult's diet? The answer to this question may be found in the natural history of animal and man. Briefly, milk is supplied by the mammalian adult to its young and this supply varies in different species from approximately one month to one year after birth. Thereafter, none of the species in the state of nature is furnished with milk. Milk, therefore, cannot be considered a natural food for the adult animal. From a biological point of view, the mammalian infant may be considered as a parasite on its mother, but in the wisdom of nature, this parasitic habit is discontinued at a comparatively early period in life. In the life history of every species, whether carnivorous or herbivorous—whether its diet consists exclusively of meat or of plants—the transition from the suckling stage to adult life is rapid. The young rabbit changes from a diet of milk to that of leaves in a few days; the young lion from milk to meat; the fruit-eating bat from milk to fruit; and the blood-sucking bat from milk to blood. Since these animals live and continue to propagate, it is obvious that the adult diet must contain all of the necessary food elements which are present in the maternal milk; and man's diet affords no exception to this rule. His geographical distribution is proof of this fact. From pre-historic times to the discovery of America, the milk-producing animals—the cow, sheep, goat, ass, camel, and reindeer — were confined to an area approximately from 0° to 70°N. Latitude and 15°W. to 90°E. Longitude. This includes, roughly, Europe, Russia and Siberia, India, Persia, Arabia, and East and North Africa. The rest of the world—Japan, Australia, China, and Islands in the South Pacific—had no milk, except for the isolated use of the mare; and yet, within historical times, the Chinese Empire reached its highest degree of civilization, and to-day, in the interior of China, where for centuries there has been practically no admixture of populations, milk is still foreign to the adult diet.

Whole-wheat bread affords an example of psychological bias running contrary to experimental facts. Since milling became known, civilized man has tended to depart from the whole-wheat bread of his ancestors. The first concentrated effort to influence the return of its use was during the famine in Prussia in 1868; but, in spite of all efforts to keep up the use of this product, when living conditions improved interest in bread reform disappeared and the Prussians returned to white bread. A reform wave then appeared in England, with leagues and newspaper propaganda; but this also met with an early death. Shortly after, Rubner, one of the great biochemists of his day, showed that the proteins of bran were not only digested with great difficulty, but that they were only partially utilized. Whole-wheat bread is, therefore, uneconomical. With the advent of the Great War, Germany, and eventually practically the entire world, of necessity took to whole-wheat bread, but shortly after reverted largely to the white product.

Insistence upon the use of whole-wheat bread has been based latterly upon its high content of a certain vitamin, its value in the relief of an intestinal disorder, and its nutritional value. It might, therefore, be of interest to those who do not relish this article of diet and prefer white bread, to know that Vitamin B is found in a variety of other and more attractive products and, as far as the intestinal disorder is concerned, other substances may be used more economically and more efficiently. We are, therefore, left to consider its nutritional value. Here, again, the verdict is "not proven;" white flour is beyond any doubt a better source of energy. With whole-wheat bread, much energy is lost in the form of indigestive cell membranes, and one of the sugars which whole-wheat bread contains, called pentose, yields about 25 per cent. less energy than the sugars of white flour. In addition, the indigestible cell membranes of whole-wheat tend to cause increased activity of the intestinal tract and thereby another 4 or 5 per cent. of food value may be lost. Whole-wheat bread is very rich in cellulose and children are, as a rule, intolerant to diets of high cellulose content and, with an irritated gastro-intestinal tract, appetite may be impaired. Mothers might, therefore, hesitate to force upon their children that which they themselves may find unwholesome, merely because they think it will do good. (See British Research Council, Special Report series No. 135.)

We now come to the vitamins. We are told—and I am now quoting advertisements—

that man in his struggle for civilization has become his own arch-enemy, as he has unwittingly enslaved himself by new tastes and appetites and his diets have deprived him of the proper nourishment. Man is shown trapped by the comforts which surround him and, thus weakened, with lowered vitality, as a subject to all illnesses from which he now suffers. Instinct must be supplemented by knowledge; and to protect ourselves against the ravages of civilization, we must take tablets of vitamins in concentrated form. The apotheosis of the application of the vitamin concept is the irradiation of laundry and cigarettes and insistence upon the use of irradiated foods. Foods must now be exposed to ultra-violet light, if civilized man is to be protected against himself. When we read of somewhat similar practices in the barren regions of Central Australia, amongst Medicine-men in the Congo, camphor-hunters in Borneo, Guarani Indians in South America, or the head-chiefs of Masai, we call them fetishes and tabus.

The reaction of the medical profession, in general, to the incorporation of vitamins in food is succinctly put, with typically English wit, in an editorial in *The British Medical Journal* of April 18th, 1931. Apropos of incorporation of vitamins in bread, the editorial, in part, reads as follows:—

> It is possible that good results on the general health of the population might follow an increased consumption of Vitamin B, though the point is still open to much controversy. Since Vitamin E seems undoubtedly (at least in animal experiments) to increase reproduction, some people might regard the automatic inclusion of this in their diet as an unwarrantable liberty. It seems, on the whole, unlikely that the artificial addition of vitamins to bread would profit any but the firms who could advertise the article to the disadvantage of their rivals.

Because white rats fed on a diet deficient in Vitamins B1 and B2 lose their appetite, cease to gain weight and die in three to five weeks, it does not follow that we must eat yeast or foods exposed to ultra-violet rays. This experiment merely proves that these vitamins are a necessary part of food; but experiment has also shown that the vitamins are very widely distributed in nature and our natural foods, and one of their chief characteristics is the marked disproportion between their importance in the human economy and the amounts necessary to maintain health. We are told in one advertisement that one must become almost a student of the subject to choose the proper foods in order to obtain the proper supply of vitamins. May I suggest that one must be a very expert student on the subject to avoid them.

One can hardly dismiss this subject without mention of yeast—a product so prominent in the public eye at present. In spite of its well advertised high vitamin content, I believe I may state without hesitation that notwithstanding the apparent endorsement of "the physician to former Spanish Royalty," "the personal physician to Marshal Foch," a "noted Vienna hospital authority," "Spain's foremost dermatologist" and the "physician in charge of the Municipal Hospital of Copenhagen" that good health and long life are still perfectly compatible without the daily consumption of a cake or two of this product. If you ask for an explanation of the use of the names of these physicians, my answer is that, though one cannot agree with George Bernard Shaw in many matters, I do agree with him that, as to honour and conscience, doctors have as much as any other class of men, no more and no less. You may have observed that all of these endorsements come from parts of Europe where the struggle for existence is at present acute. Struggle or no struggle, I can assure you that Canadian medicine would not tolerate this unethical practice.

Although many causes may be assigned to the alleged deterioration of the human race, the unwise choice of foods is not one of the most important factors. This is an old world. It has withstood doctrines, notions, hypotheses and theories in religion, politics, laws, and customs. The records of the past are crowded with beliefs, opinions, and practices which, all-commanding in their day, are now known only to the few whose inclination leads them to rummage amongst the forgotten; and beliefs in regard to food provide no exception.

In its fundamental instincts the race is well found. The study of nutrition is not new; man's experience with food has been coterminous with his existence. Countless experiments have been made by millions of men during thousands of years. In all parts of the world, from pre-historic times, men have been constantly engaged in finding out what things are good to eat and what to avoid. Long before we knew of vitamins, Catherine of Aragon, wife of Henry VIII, imported a Dutch gardener and introduced the custom

of eating green vegetables in England; and it was as early as 1720 that Kramer, in speaking of scurvy, in his *Medicina Castrensis* stated that . . . "if you can get green vegetables . . . if you have oranges, lemons, citron or their pulp . . . you will, without other assistance, cure this dreadful evil." Long before we knew of the existence of the secretions in the stomach, or the important part they play in digestion of food, man learned that a food unpleasing to the palate is apt to produce disgust, or even vomiting; while palatable food is eaten with pleasure, retained with ease, and digested with comfort; the Hindu learned to eat curry along with his insipid rice; the Spaniard ate onions with his bread; and the Englishman mustard with his beef. Long before we discovered that the amounts of these secretions are influenced by psychic factors, the Irish peasantry, in times of famine, when they were compelled to live on potatoes alone, hung up a red herring and pointed their potato at it to obtain a suggestion of a savoury food.

It is obvious that I am not attempting to belittle the very valuable work which has been, and is being, done in the science of nutrition. No one familiar with this subject can possibly doubt either the existence or the importance of the recognition of the various food elements; but the reaction of the scientific investigator to discoveries is to beware of finality where knowledge is incomplete and where deductions may be hypotheses. The mind of science is one of high ideals and it is modest, for it recognizes that there are many things it does not know. It objects to the uncritical use of notions of unreflective thought and this attitude is nowhere more important than in matters of health. In the study of nutrition, it recognizes it is in the midst of a continual evolution of facts and development of truth, and its first object is to get the facts. As facts are established, the medical profession, in general, applies them where, with the exercise of reasonable care and judgment, it believes they should be applied. The exercise of reasonable care and judgment is most important for we now recognize that, though addition of vitamins to diets has its uses in disease, there is a possible danger in this practice in health. We now have definite experimental proof, at least with respect to one of the vitamins, that excess quantities can do harm. The condition produced is not unlike that found in hardening of the arteries. It is quite true that large excesses are necessary to produce this condition, but we have no reason to believe that small excesses acting over long periods of time may not lead to the same result as large excesses acting during short periods. Medicine affords numerous lessons. I mention this danger of overdosage to emphasize the fact that in the exploitation of vitamins, the medical profession, as a whole, is not a partner. The relation men hold to truth, their respect for facts, and their use of facts largely determine their place amongst their fellow-men, and the medical profession is very jealous of its reputation.

Why is it that man can still follow the dictates of his instinct and experience? Why may he continue to satisfy his appetite with meat, eggs, bread, and cereals without developing an acidosis and, if he cares, dispense with milk and whole-wheat bread without danger of exposing himself to a variety of ailments. The answer is found in the natural history of animal and man.

Some idea of the natural history of an animal may be gained from the study of its structure, its environment, and its habits. For example, the teeth are instruments employed for dividing and preparing food for digestion. They must, therefore, exhibit in figure and construction a relation to the nature of the diet. In carnivora—flesh eaters—they rise in sharp-pointed eminences and those of the lower jaw shut in with those of the upper; whereas, in herbivora—vegetable eaters—the surfaces are flat and opposed to each other in a vertical line. Carnivora have much more prominent canine teeth than herbivora. The enamel in the carnivora is confined to the surface and with the herbivora it is intermixed with the bone. In carnivora, the articulation of the jaws is backwards and forwards; in herbivora side to side movement is the chief action. Thus, in flesh eaters, the teeth are calculated for tearing and swallowing the food in masses, whereas, in the herbivora, they are for grinding, the food being well comminuted before swallowing. Carnivora have difficulty in digesting any food other than flesh and the herbivora have difficulty in digesting any food other than vegetables. Even the frugivora—the fruit and seed eaters—are limited in their diet; though with a greater intelligence and a better equipped digestive tract, they can choose their food more freely; the great apes can supplement their usual food by birds, lizards, grubs, and

the like. The majority of the animal kingdom are confined to definite regions, and each species has its own limitations in the matter of procuring food.

In respect to all of these attributes, man stands superior. He heads the animal kingdom, not because of complexity of structure, nor because he has adjusted himself to his environment—the fish has a complex structure and is quite comfortable in its aquatic home. Man heads the animal kingdom, because he is *independent* of his environment and he has become independent because of his experiences during the successive stages of his development. Because of these experiences, he has an assortment of teeth, both for tearing food and for grinding it, and his jaws move with equal facility both forwards and backwards and from side to side. Differing from animals he is not confined to particular regions of the earth. The West Greenlander lives quite comfortably in the Cape Farewell region and reaches as far as 74° North Latitude where the mean average temperature during January is about 60° below zero. Man lives in the district from the Western Sahara to Northwest India and over Central Australia where the mean temperature exceeds 113° and reaches a maximum as high as 120° or more. He can, also, support a variety of atmospheric pressures; large populations live quite comfortably in South America at 16,000 feet above the sea level, at which level the barometric pressure is reduced to about one-half of that of Montreal; and he lives near the Dead Sea, a region 1300 feet below the sea level. Near the Arctic Circle, at 67½° North Latitude, he lives quite comfortably where for many months during the year there is no day-light and where for many months there is no night. Since food supply depends upon locality, man has thus learned to adapt himself to a variety of food. He can satisfy himself equally with flesh or vegetables; until recent years, the diet of certain parts of India, China, Japan, and the Philippine Islands was essentially rice, and the Eskimo was practically carnivorous in his dietary habits. He had to be—for when we reach 74° North Latitude, we find that the earth's surface is covered throughout the year with many hundreds of feet of ice. If it was the design of Nature that vegetables were an indispensible article of diet, the Eskimo would not be here to-day.

For a long time, man's dietary habits must have differed very little from the man-like ape. In studying food habits, we must compare things with things which are comparable. It would hardly be logical to compare the dietary habits of members of the Canadian Club with those of the gorilla; we should compare the gorilla with pre-historic man. As pre-historic man is not available, let us observe the practices of uncivilized man. Explorers tell us that man and the man-like ape (the *anthropoidea*) eat identical foods; bird-eggs, mice, frogs, lizards, shell-fish, grubs, scorpions, centipedes, and insects form quite an attractive diet to the primates below man and they are equally attractive to the Bushmen of Australia and the Head-hunting tribes of the Upper Amazon—the very few survivors of man who afford a living example of the Stone Age. The Australian aborigine divests the wings and legs of the gigantic fly (ciculi) and gobbles it alive. To members of the Canadian Club, it would seem rather unappetizing if, at the dinner table, they found their food served, not as they are accustomed to have it, but after having been thoroughly masticated by their wives, but this is the custom of the Head-hunters of the Amazon. Explorers tell us that the previously masticated yuca root is the standard dish of every household.

Man, as animal, has higher and lower forms and upward progress depended upon development of the central nervous system. Increase in brain substance, both in amount and complexity of structure, is a characteristic, and is the most dominant finding as we compare fish with amphibian, amphibian with reptile or reptile with bird. With the development of a greater brain, both in size and complexity, man was able to augment his food supply by three signal advances. With a cranial capacity of about 1000 cc., that is, when his brain was still the site of the lowest form of human intelligence, man began to employ artificial advances in hunting and fishing. When the brain developed to a capacity of 1150 cc., man became a cooking animal. He then learned that it is not the food which is actually eaten which nourishes, but only those portions which are digested and absorbed. Definitions are always dangerous. Plato defined man as "a biped without feathers," but he was severely ridiculed by Diogenes who plucked a fowl and let it walk through the streets of Athens. I believe, however, that we are safe in defining man as a cooking-animal. The third great advance which augmented his food supply occurred

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THE 37th ANNUAL DINNER OF THE NEW YORK BRANCH

At this dinner, held in the Fraternity Clubs Building, New York, on April 21st, Sir Arthur Currie was the guest of honour and principal speaker, other speakers including J. G. Saxe, Arts '97, Dr. H. Vineberg, Med. '78, Dr. J. A. L. Waddell, Sci. '82, and Casewell Heine, Arts '98. Owing to the illness of E. J. McIver, Arts '93, President of the Branch, J. G. Saxe, presided.

University News and Notes

CONVOCATION, 1932

Five hundred and seven degrees and five honorary degrees were conferred at the Convocation of the University in Loew's Theatre on the morning of Thursday, May 26; and on the previous day 66 diplomas were bestowed at a Convocation in Moyse Hall. Arts, as usual, furnished the largest number of candidates, the total including B.A., 137; B.Sc., 26; and B. Com., 51. In Medicine 98 degrees were awarded, in Engineering 46, in Architecture 5, in Law 22, in Dentistry 10, in Agriculture 20, in the Library School 13, and in the School of Household Science 8. Degrees in the Faculty of Graduate Studies and Research included M.A., 27, M.Sc. 18, M. Eng. 7, M. Com. 1, and Ph.D. 17.

DR. RABINOWITCH HONOURED

Widespread interest was aroused and warm congratulations were offered to Dr. I. M. Rabinowitch in April when it was announced that the University would confer on him at the annual convocation in May the seldom-granted degree of D.Sc. Dr. Rabinowitch, Director of the Metabolism Department at the Montreal General Hospital, is Assistant Professor of Medicine and Lecturer in Bio-Chemistry at McGill, and the degree was granted to him for his outstanding work in metabolism and his notable contributions to knowledge in this and other scientific fields of medical practice. As a teacher, he has also achieved well-merited distinction.

HONORARY DEGREES

The honorary degree of LL.D. was conferred by the University upon five candidates at the Convocation in Loew's Theatre on May 26, those so honoured being Dr. J. H. Finley, Associate Editor of the New York *Times*, who delivered the Convocation Address; Major-General Robert U. Patterson, a graduate of McGill and Surgeon-General of the United States Army; Dr. John S. Plaskett, Director of the Dominion Astrophysical Observatory at Victoria, B.C.; Horatio Walker, one of the foremost Canadian artists; and Dr. Alfred N. Whitehead, Professor of Philosophy at Harvard University.

DIPLOMAS AWARDED

At the Convocation in Moyse Hall on May 25, diplomas were bestowed as follows: School for Graduate Nurses 34, School of Pharmacy 2, School of Physical Education 14, School for Social Service Workers 13, and Conservatorium of Music 2. As mentioned elsewhere in this issue of *The News*, diplomas in Pharmacy and Social Service Work were bestowed on this occasion for the last time, decision to close these departments at the end of the session having been announced earlier in the year.

UNIVERSITY ANNUAL REPORT

Emphasis upon the determination of McGill authorities to develop the University into the Dominion's outstanding centre of social and scientific research appears in the University annual report published in April. Citing the position at present held in chemistry, biochemistry, neurology, pathology, and other noted departments, the report establishes the conviction that the goal admittedly sought is by no means impossible of attainment. A searching survey of the University, in which all departments co-operated, has now been completed and the knowledge gained as a result is proving of great benefit to those responsible for McGill's progress and welfare.



THE GIRARD COLLEGE WAR MEMORIAL
A preliminary study in plaster.

DR. PENFIELD'S PROMOTION

The promotion of Dr. Wilder G. Penfield from Clinical Professor of Neurological Surgery to Professor of Neurology and Neuro-Surgery was announced by the University in April. Subsequently it was stated that Dr. Penfield would head a new Neurological Institute to be established at McGill with the generous gift of the Rockefeller Institute, mentioned elsewhere in this issue of *The News*. Dr. Penfield graduated from Princeton University as a Bachelor of Literature, then studied at the College of Physicians and Surgeons in New York, and at Harvard, whence he proceeded as Rhodes Scholar to Oxford, where he took his B.Sc. He then took his medical degree at Johns Hopkins University and, returning to England, acquired his M.A. His work at McGill in the past three years has been notable and his recent promotion has been the source of much gratification to his professional colleagues.

DR. WILLEY RETIRES

Dr. Arthur Willey, for twenty-two years Strathcona Professor of Zoology, retired from work at the University at the conclusion of the past session. Educated at London, Cambridge, and Columbia Universities, Dr. Willey came to McGill after some years of research work in the East Indies, during which his studies of the nautilus earned wide renown. This was increased by publication of a number of scientific volumes, the most recent of which "Lectures in Darwinism," appeared last year. Dr. Willey was the guest of honour on May 2 of the local branch of the Sigma Xi Society and received from his colleagues a camera and a microscope in appreciation of his distinguished work at McGill.

MASTER'S DEGREE IN LAW

In continuation of the policy of increasing at McGill facilities for students seeking higher degrees, it was announced following a meeting of Corporation in April that the degree of Master of Civil Law would henceforward be available in the Faculty of Graduate Studies and Research. The courses leading to this degree have received consideration and a number of students are expected to register for them next autumn.

DEATH OF DR. A. D. BLACKADER

Through the death of Dr. A. D. Blackader, Emeritus Professor of Pharmacology, Therapeutics, and Pediatrics, which occurred in the Royal Victoria Hospital, Montreal, on March 14, the University lost one of its noted figures and the city a practitioner of medicine who graduated from McGill in 1871 and, after a few years of work abroad, returned to serve until his death at the age of 85, the community in which he was born. Referring to his death, Dean Martin has said, "In spite of his advanced years, he was active until a week before the end. It was due to his efforts alone that the *Canadian Medical Association Journal* became one of the best of its kind in the British Empire, but it is perhaps more in a personal way that his loss is most keenly felt, for he stood among his colleagues as a type expressing in work and deed the highest ideals of his profession."

TWO DEPARTMENTS CLOSE

In accordance with plans announced in a previous issue of *The News*, the Department of Pharmacy at McGill and the School for Social Workers passed out of existence at the close of the 1931–'32 academic year. In view of the difficult financial situation existing, continuation of these departments was considered not to be justified.

GIFT FOR CANCER RESEARCH

Announcement of a gift to the University of $25,000 for research in cancer was made by the Principal on February 23. Sir Arthur stated that the donor, a citizen of Montreal and former student at McGill, wished to remain anonymous. It was further announced that part of the gift would be used to increase the effectiveness of the cancer clinic in the Royal Victoria and Royal Victoria Montreal Maternity Hospitals, and to establish an out-door cancer clinic at the former hospital.

STUDY OF AVERTIN

Important pharmacological results arising from a two years' study of the German drug avertin were reported by Dr. Wesley Bourne to the Montreal Society of Anæsthetists at a meeting held in the Notre Dame Hospital, Montreal, in March. Study of avertin at McGill has been conducted by Professor R. L. Stehle, Chairman of the Department of Pharmacology, and Drs. M. Bruger, N. B. Dreyer, B. B. Raginsky, and Wesley Bourne.

RADIUM THERAPY

The important work in Radium Therapy being accomplished at the Montreal General Hospital is revealed in a report recently presented. The Department of Radium Therapy was established at the Hospital, through the generosity of J. C. Newman, Esq., on April 22, 1930, and many cases have been treated, the total in the 23 months previous to April of this year including 161 private, 144 semi-private, and 644 public patients. In keeping with the wishes of the donor, no charge is made that would constitute a hardship to the sufferer, and rates for all classes of patients are believed to be lower than in any other institution on the continent.

ROYAL SOCIETY MEETINGS

On May 16 it was announced that Dean A. S. Eve, of the Faculty of Graduate Studies and Research, would officially represent McGill at the jubilee meetings of the Royal Society of Canada to be held in the National Research Laboratories, Ottawa, May 26–28. McGill will be taking an important part in these meetings as this issue of *The News* goes to press, and it is hoped that details of the University's participation will be available for presentation in our September number.

RADIO DEBATE

In the first Canadian-American intercollegiate radio debate on record, students of McGill and the University of Pennsylvania clashed on Saturday, March 26, over the coast to coast network of the Columbia Broadcasting System. McGill, represented by H. C. Goldenberg and Fred. V. Stone, vigorously upheld the affirmative in the subject "Resolved that the Foreign Policy of the United States is Retarding Disarmament," and the Pennsylvania debaters as vigorously responded. Outspokenness was a feature of the highly successful event, in which no decision was expected, the chairman, H. V. Kaltenborn, of New York, impartially summarizing the arguments and congratulating the speakers on their skill and their adherence to the rules of friendly debate.

INTERCOLLEGIATE DEBATES

In addition to the radio debate mentioned above, the McGill University Debating Team in the past season met and defeated the University of Porto Rico in Porto Rico, Cornell University at Ithaca, and the University of Vermont in Montreal. Queen's University was also defeated both in Montreal and Kingston and non-competitive debates were held in conjunction with the University of Toronto and the University of Montreal. The Senior Debating team was undefeated in the season and a Freshman Team, entered in the Montreal Debating League, acquitted itself well and gained valuable experience.

HELMINTHOLOGY REPORT

A progress report on the work of the Institute of Helminthology at Macdonald College, presented to Corporation in April, pointed out that it was the intention of the Empire Marketing Board, one of the sponsors of the Institute, to make Macdonald College the research centre in Helminthology for the whole North Temperate Zone. The Institute, whose duty is to conduct research in the parasites which afflict horses, cattle, sheep, pigs, and poultry, is under a committee which includes Dean H. Barton, Dr. R. S. Conklin, Dr. J. L. Todd, Robert Newton, Dr. E. S. Archibald, Sir Arthur Currie, and Dr. H. M. Tory.

HELMINTHOLOGY APPOINTMENT

On May 25 the University announced the appointment as Research Professor in Helminthology and Director of the Helminthology Institute at Macdonald College of Dr. T. W. M. Cameron, of Edinburgh University. Dr. Cameron, a native of Glasgow, holds the degrees of M.A., B.Sc., Ph.D., D.Sc., and M.R.C.V.S., and is an authority in his chosen field. He brings to McGill a record of much scientific study in helminthology and a reputation both as a writer on the subject and as an experienced teacher.

ROYAL SOCIETY SCHOLARSHIPS

Scholarship awards announced in April by the Royal Society of Canada included $1,500 to John Culliton, Assistant Professor of Economics, who will pursue studies in the London School of Economics; $1,500 to Dr. J. S. L. Browne, Holmes Gold Medallist in 1929 and Demonstrator in Biochemistry, who will carry out research in Europe and at University College, London; $1,500 to Miss Ruth E. Moore, M.A., 1930, who will continue classical studies at Radcliffe College; and $1,500 to Everett P. Linton, M.Sc., 1930, who is studying for his Ph.D. in physical chemistry at Oxford.

RESEARCH COUNCIL AWARDS

Among the awards announced in April by the National Research Council were the following to be held at McGill: Fellowships ($1,000)—E. G. Hallonquist, New West-

(*Continued on Page 50*)



THE GIRARD COLLEGE WAR MEMORIAL

This beautiful memorial, the work of Dr. R. Tait McKenzie was unveiled at Girard College, Philadelphia, on May 30th.



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603



EXECUTIVE COMMITTEE OF THE GRADUATES' SOCIETY, 1931-'32

G. B. Glassco G. McL. Pitts J. de G. Beaubien J. G. Notman Dr. L. C. Montgomery G. S. Currie
Dr. L. H. McKim J. T. Hackett H. M. Jaquays G. G. Gale W. A. Merrill

Semi-Annual Meeting

UNDER the chairmanship of H. M. Jaquays, the semi-annual meeting of the Graduates' Society was held in the Arts Building of the University at 8:15 p.m. on Tuesday, May 10.

Honorary Secretary's Report

Following approval of the minutes of the Annual Meeting held on October 13, 1931, Dr. L. H. McKim, Honorary Secretary, presented a report, which noted a diminution in membership, owing to existing financial conditions, and emphasized the necessity of stimulating the interest of branch societies. Members in good standing, Dr. McKim reported, totalled 2,358, plus 966 whose dues for the current year had not been paid. This compared with 2,638 members in good standing in May, 1931, plus 651 at that time in arrears.

Honorary Treasurer's Report

W. A. Merrill, Honorary Treasurer, then presented a report in which a deficit of $1,535.64 on the year's work was forecasted. A small surplus would have appeared, Mr. Merrill explained, had it not been for the burden assumed by the Society in operating the Graduates' Employment Bureau. Total revenue for the year was estimated at $9,073.46 and expenditures at $10,609.10.

Editorial Board Report

Following the adoption of the Honorary Treasurer's report, Dean F. M. G. Johnson, Chairman of *The McGill News* Editorial Board, reported on the magazine's progress and noted that the deficit of $268 to be expected in the current year was well within the $1,000 deficit authorized. He invited comment on the magazine, and the President stated that the Society's Executive were satisfied that the paper was adequately performing the work for which it was intended.

Endowment Fund

S. A. Neilson, Chairman of the Endowment Fund Committee, then reported that in view of

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existing economic conditions no general appeal to graduates for subscriptions had this year been made, nevertheless 135 subscriptions had been received, totalling $2,278. The Fund, therefore, stood at a total face value of $72,000 in bonds, plus $4,466.75 in the bank.

Employment Bureau

G. B. Glassco, Executive Secretary of the Society and Director of the Employment Bureau, then presented a report on the Bureau's work, showing that in the calendar year 1931, 46 men and 22 women had been satisfactorily placed in employment, at a cost of $2,019.84. This result compared favourably with results achieved elsewhere, and the meeting consequently assented unanimously to the President's suggestion that the work of the Bureau be approved and its continued operation authorized.

By-Law Amendment

Following the presentation of reports, Article 3 of the By-Laws of the Council was amended to permit non-graduate past students of McGill and non-McGill members of the University staff to become life-members of the Society on payment of the usual $50 fee.

Gymnasium Project

The President then addressed the meeting and stated that the Society's Executive had decided to consider a plan for raising money for a University gymnasium. No campaign for funds was contemplated in the immediate future, but a committee to study all aspects of the problem had been appointed and it was hoped that, through the activity of the Society, a first-class gymnasium would eventually come into being. Mr. Jaquays asked that the Council approve the measures taken by the Executive to date and, on a motion by Mr. J. G. Notman, the endorsation was enthusiastically carried.

Other Reports

In addition to the reports mentioned above, the Council welcomed reports presented by the Reverend E. M. Taylor, Secretary of the District of Bedford Branch, and E. G. McCracken, Secretary of the McGill Society of Toronto. Dr. L. C. Montgomery contributed to the discussion arising out of the branch society reports, advocating closer touch between the parent and out-of-town societies. There being no further business, the meeting then adjourned.

The Graduates' Society

Election of Officers — 1932

Semi-annual meeting-

Each member of the Society may vote. Each ballot must bear the member's signature, and must be received by September 30, 1932. Nominations have been made in accordance with the Society's Constitution and By-Laws by the Nominating Committee. No other nominations have been received.

For PRESIDENT. Term 2 years.

P. D. ROSS, B.A.Sc. '78, LL.D. (QUEEN'S) '19. Owner and editor, Ottawa Journal. Author, "Retrospects of a Newspaper Person," 1931. Past Pres. (now Hon. Pres.), Ottawa Valley Graduates' Soc. Member, Board of Trustees, McGill Graduates' Endowment Fund.

For REPRESENTATIVE ON THE BOARD OF GOVERNORS Term 3 years.

H. M. JAQUAYS, M.A., M.Sc. '99. Vice-Pres. Steel Co. of Can. Ltd., Montreal. Retiring Pres. Graduates' Soc.

For FIRST VICE-PRESIDENT. Term 2 years. Vote for One.

J. W. JEAKINS, B.A. '13. Executive Royal Trust Co., Montreal. Former Executive Sec. Graduates' Soc.

W. A. GRAFFTEY, B.Sc. '14. Merchant, Montreal Lumber Co. Ltd., Montreal. Officer, Montreal Branch Graduates' Soc. 1930–32.

For EXECUTIVE COMMITTEE. Term 2 years. Vote for Two.

A. SYDNEY DAWES, B.Sc. '10. Engineer, Atlas Construction Co. Ltd., Montreal.

A. S. BRUNEAU, B.A. '13, B.C.L. '17. Advocate, Campbell, McMaster, Couture, Kerry and Bruneau, Montreal. Lecturer in Company Law, McGill.

A. T. HENDERSON, M.D. '13. Demonstrator in Medicine, McGill. Practising physician.

MRS. A. T. BONE (NEE ENID M. PRICE), B.A. '17, M.A. '20. Publication: "Changes in the Industrial Occupations of Women, 1914–1918 in Montreal." Assist. Sec. Alumnæ Soc. of McGill, 1931–32.

DAVID R. LOGAN, B.A. '26. Executive, Dominion Securities Corp., Montreal. Pres. McGill Rowing Club.

S. BOYD MILLEN, B.A. '27, B.C.L. '30. Advocate, Meredith, Holden, Heward & Holden. Past Pres., Students' Council. Officer, Montreal Branch, Graduates' Soc. 1930–32.

For COUNCIL OF THE GRADUATES' SOCIETY. Term 2 years. Vote for Five.

E. J. MACIVER, B.A. '93. Asst. Sec. Prudential Insurance Co. of America Pres., New York Graduates' Soc.

MISS C. I. MACKENZIE, B.A. '04. Principal, High School for Girls, Montreal.

E. R. PEASE, B.A. '07, B.Sc. '08. Partner, Drysdale & Pease, Montreal.

G. F. STEVENS, M.D. '07. Supt., Winnipeg Gen. Hosp.; Pres.-elect, American Hospital Assoc., Pres. Winnipeg Branch, Graduates' Soc.

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C. E. BROOKS, B.Sc. '08. Chief of Motive Power, C.N.R., Montreal.

E. S. WINSLOW-SPRAGGE, B.Sc. '08. Asst. Gen. Manager, Can. Ingersoll Rand Co., Montreal.

A. G. L. McNAUGHTON, B.Sc. '10, M.Sc. '12, LL.D., 20. Chief of the General Staff, National Defence H.Q., Ottawa.

P. D. WILSON, B.A. '10. Graduate, Osgoode Hall Law School. Barrister, Ottawa. Pres. Ottawa Valley Graduates' Soc.

H. D. BRYDONE-JACK, B.Sc. '11. Assist. Engineer, C.P.R., Winnipeg., Assoc. member, Engineering Inst. of Can., Assoc. member, American Soc. of Civil Engineers. Member, Assoc. of Professional Engineers of B.C.

K. D. JOSEPH, B.Sc. '13. Chartered Life Underwriter, Can. Life Ass. Co. Toronto. Former Sec., McGill Soc. of Toronto.

E. C. AMARON, B.A. '23, B.D. (UNITED THEOLOGICAL COLLEGE). Principal, Stanstead College.

B. C. McLEAN, M.D. '27. Supt. Touro Infirmary, New Orleans.

Graduates' Representative Fellows on the Corporation of the University

For a term of three years from Oct. 1, 1932

The Graduates' Society conducts this election for the University and on behalf of the Graduates, by sending out ballots to all graduates, except those whose addresses are unknown. Graduates who are members of the Society will also receive a separate ballot for the election of certain officers of the Society.

Each graduate has the privilege of voting for a representative graduate for each of the faculties where there is a vacancy, irrespective of from which faculty the voter graduated. In each case he may vote for any graduate of three years' standing; The Nominating Committee has chosen the names on the ballot.

GRADUATES' REPRESENTATIVE FELLOW IN ENGINEERING. Vote for One.

A. A. BOWMAN, B.Sc. '99. Executive, Can. Ingersoll-Rand Co., Montreal.

G. McL. PITTS, B.Sc. '08, M. Sc. '09, B. ARCH, '16. Architect and Engineer, Maxwell & Pitts, Montreal. Former Demonstrator in Civil Engineering, McGill. Publication, "Transportation in Canada," 1931. Officer, Montreal Branch Soc. 1928–1932. Officer, Graduates' Soc. 1930–32.

J. C. McDOUGALL, B.Sc. '09, B. ARCH., 10. Architect, Montreal. Officer, Montreal Branch Soc. 1931–32.

F. W. DAKIN, B.Sc. '10. Pres. Dakin Construction Co. Ltd., Montreal. Pres. Gleneagles Investment Co. Ltd., Montreal.

GRADUATES' REPRESENTATIVE FELLOW IN MEDICINE. Vote for One.

A. G. NICHOLLS, B.A. '90, M.A. '93, M.D. '94, D.Sc. '09. Editor, Canadian Medical Association Journal. Author, "Principles of Pathology" (with Prof. J. G. Adami). Author, numerous articles in medical publications. Fellow, Royal Soc. of Can., Royal College of Physicians of Can., Royal Institute of Public Health, London. Former Asst. Prof. of Pathology and Lecturer in Medicine, McGill. Former Professor of Pathology and Bacteriology, Dalhousie Univ.

W. G. REILLY, M.D. '95. Practising physician, Montreal. Former demonstrator in Anatomy, McGill. Former Lecturer in Medicine, Bishop's College.

L. L. REFORD, B.A. '00, M.D. '04. Post graduate student, Johns Hopkins and Greifswald, Germany. Retired Surgeon, Montreal. Author of articles in medical publications. Former Demonstrator in Surgery, and Anatomy, McGill.

GRADUATES' REPRESENTATIVE FELLOW IN LAW. Vote for One.

D. CUSHING, B.A. '07, B.C.L. '10. Notary, Barron & Cushing, Montreal.

H. P. HONEY, B.A. '13, M.A. '15, LL.B. '20, B.C.L. '22. Notary, W. deM. & H. M. Marler, Notaries, Montreal.

G. B. FOSTER, B.C.L. '20, K.C. Lawyer, Hackett, Mulvena, Foster, Hackett & Hannen, Montreal.

GRADUATES' REPRESENTATIVE FELLOW, WESTERN PROVINCES. Vote for One.

A. C. RUTHERFORD, B.A. '81, B.C.L. '81, LL.D. (McGILL, TORONTO, McMASTER & ALBERTA). Barrister, Rutherford, Rutherford & McCuaig, Edmonton. Chancellor, Univ. of Alberta. Pres. No. Alberta Branch, McGill Graduates' Soc.

O. S. WAUGH, M.D. '08. Surgeon, Winnipeg.

GRADUATES' REPRESENTATIVE FELLOW, PROVINCE OF ONTARIO. Vote for One.

T. T. IRVING, B.Sc. '98. Chief Engineer, C.N.R., Toronto. Pres. McGill Soc. of Toronto.

A. K. MACCARTHY, B.Sc. '06. Pres. & Managing Director, Capital Motors of Ottawa, Ltd.

G. E. REID, B.A. '15. Manufacturer, London, Ontario.

GRADUATES' REPRESENTATIVE FELLOW, MARITIME PROVINCES AND NEWFOUNDLAND. Vote for One.

J. G. MACDOUGALL, M.D. '97. General Surgeon, Halifax. Author of articles for Canadian Med. Assoc. Journal. Honorary Fellow of Acad. of Medicine, Rio de Janeiro. Assoc. Prof. of Surgery and Clinical Surgery, Dalhousie Medical School. Surgeon, Victoria Gen. Hosp., Halifax. Pres., Halifax Soc. of McGill Graduates.

F. W. ANGEL, B.Sc. '98. Consulting Engineer and Industrial Executive, St. John's, Nfld. Pres. Wm. Heap & Co. Ltd., Mechanical Engineers. Pres. Wm. Noseworthy Ltd., Mechanical & Contractors' Supplies. Vice-Pres. & Man. Director, United Nail and Foundry Co. Ltd. Sec. & Man. Director, The Bell Island Transportation Co. Ltd.

G. S. GRANT, B.Sc. '23. Asst. to the Manager, Wabana Operations, Dom. Steel & Coal Corp., Nfld. Former Executive with Nipissing Mining Co. and Huronian Belt Co.

GRADUATES' REPRESENTATIVE FELLOW, COUNTRIES OUTSIDE CANADA. Vote for One.

E. E. BILLINGTON, B.Sc., 13, B.Sc. (LIVERPOOL), M.Sc. '13. Engineering Executive, Liverpool, England.

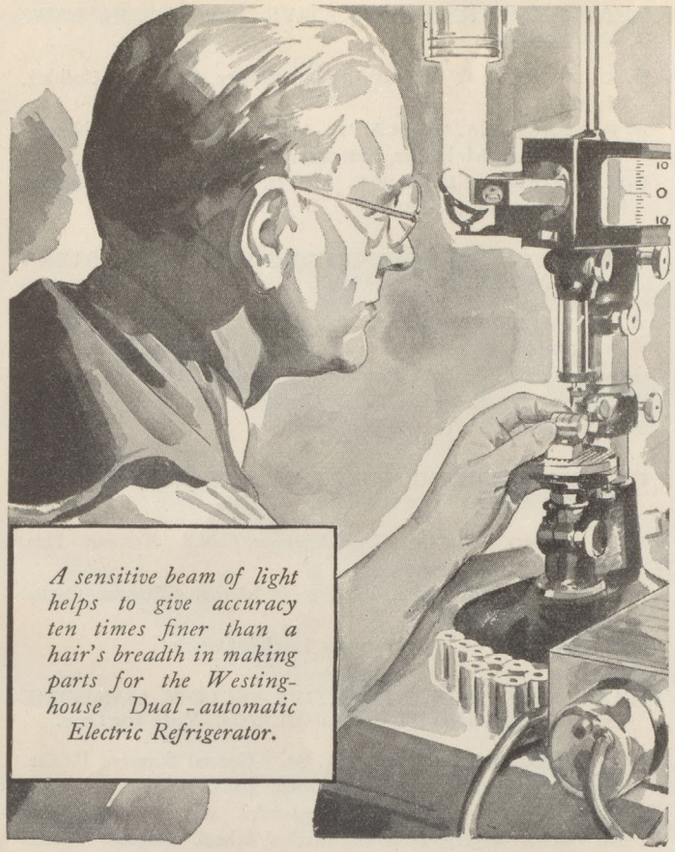
JEAN BIELER, B.A. '13, B.C.L., 19. Asst. Treas., League of Nations, Geneva.

Man and His Diet

(*Continued from Page 40*)

at a cranial capacity of about 1350 cc. Here, for the first time, we find man producing food artificially by agriculture and the breeding of animals. Biologically, therefore, the race is not to the swift, nor to the strong, but to the wise. The dinosaur was gigantic, but his brain was very small and he failed to survive.

We may summarize the observations I have made and state that, from a variety of bio-



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logical data, we learn that the factors which determine the diet of animal or man are, firstly, the kind of food available, that is, the local flora or fauna; secondly, the ability to secure the desired food; then, thirdly, come taste, digestibility, and richness of the nutrient matter. Since his physical capabilities enabled man to occupy every variety of soil and situation, man became omnivorous in his dietary habits—he learned to adapt himself to all kinds of food—animal, vegetable, or both, and he has acquired a taste for variety. If left alone, he will heed the dictates of his instinct and long experience. By doing so, he will choose a variety and sufficient quantity of foods and because of this variety and quantity his diet will contain all of the essential food elements. Modern comforts may at times tempt him to eat too much, but, as in other matters, experience will teach him to do otherwise, for he will learn, as life insurance statistics now show, that when he adds ten pounds to the belt-line, he subtracts about one year from the life-line.

University News and Notes

(Continued from Page 43)

minster, B.C., in Cellulose Chemistry; R. N. H. Haslam, (Saskatchewan), in Physics; and C. A. Winkler, (Manitoba), in Physical Chemistry. Studentships ($750)—A. H. Snell (Toronto and McGill), in Physics; and R. L. Thornton (McGill), in Physics. Twenty-two awards were made in all, with a total value of $16,150.

MUSEUM CONSOLIDATION URGED

Advocacy of a museum building, with access from the University grounds and from the city streets, is a feature of the report presented to the University authorities by Dr. Cyril Fox, Director of the National Museum of Wales, following a survey completed last winter. As Dr. Fox points out, McGill has in the McCord, Redpath, Library, Ethnological, and other museums, material that is valuable even as it stands, which would become invaluable if adequately accommodated and displayed. The wealth of McGill's collections is minimized by their present inaccessibility, and their educational value is correspondingly decreased. Realization of the quality of the collections that exist will be brought home to Montreal if means to carry out Dr. Fox's recommendations can be found.

MUSEUM COMMITTEE NAMED

Formation of a strong committee to deal with the problem of McGill's rich, though inadequately housed and co-ordinated, museums was announced following a meeting of the Governors in April. As the recent survey by Dr. Cyril Fox revealed, McGill possesses museum material of untold value, and it is with the intention of studying how this material may best be made to serve its full educational value that the

committee has been appointed. Sir Arthur Currie is chairman of the committee and the members include Dean C. F. Martin, Dr. T. H. Clark, Dr. J. J. O'Neil, Professor T. W. L. MacDermot, Dr. G. R. Lomer, Dr. Arthur Willey, Professor F. E. Lloyd, Professor F. Clarke, Cleveland Morgan, Esq., Dr. W. H. Brittain, E. L. Judah, Esq., and Professor R. Traquair.

MEDICAL HISTORY MUSEUM

Under the direction of Dean C. F. Martin, a plan to collect documents and other material relating to the history and development of the Faculty of Medicine and to the early practice of medicine in the Province of Quebec was announced some weeks ago. Photographs, clippings, manuscripts, old instruments, books, and other relics are sought for this collection in order that the McGill Medical-Historical Museum may greatly extend its scope and value. Readers of *The News* are invited to donate for preservation in the Museum material relevant to the subjects mentioned above.

M.A. IN CHINESE STUDIES

Acting upon a recommendation by the Faculty of Graduate Studies and Research, the University Corporation recently approved the establishment at McGill of a Master's degree in Chinese studies. As a result, McGill becomes the fourth university in North America and the first in Canada to offer facilities for a graduate degree in this subject. Through possession of the Gest Chinese Research Library, one of the finest collections of its kind, McGill is in a position to offer opportunities in Chinese studies equalled with difficulty elsewhere.

CHINESE HONOUR BUDDHA

On April 8, members of the Chinese community in Montreal gathered in the Gest Chinese Research Library at McGill to take part in celebrations arranged in honour of Buddha, who lived about 500 B.C., and whose birthday is popularly celebrated on that date. The Library houses a fine bronze figure of Buddha and it was before this statue that the ceremonial was conducted, the Chinese being left to carry out their rites without intrusion or interference.

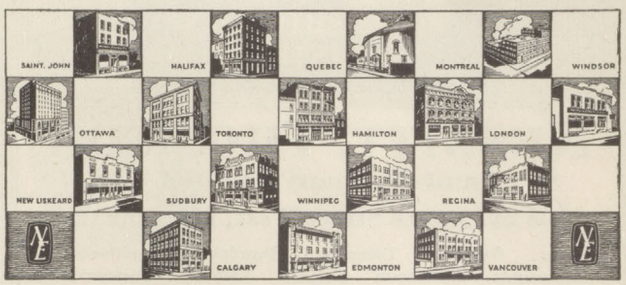
McGILL SALARIES CUT

Reduction in salaries of the administrative, professorial, and maintenance staffs of the University on a sliding scale from eleven to three per cent. was announced to come into effect on June 1 following a meeting of the Governors on April 4. These reductions, it was stated, would result in a saving to McGill of $85,000, a sum urgently needed in view of the University's decreased revenue from grants, bequests and investments. Increase of student fees, it was announced, must also be contemplated.

THE C.O.T.C'S NEW QUARTERS

The McGill Contingent, Canadian Officers' Training Corps, recently moved into new and commodious quarters in the building at 3480 University Street which previous to the erection of the new Divinity Hall was used by the Co-operating Theological Colleges of the University. Two floors of the building have been allotted to the Contingent, one mainly for storage purposes and the other for senior and junior messes. A feature of the mess room wall decorations is provided by reproductions in colours of the battle patches that distinguished the units of the Canadian Corps.

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148th BATTALION PERPETUATED

Perpetuation of the memory of the 148th Battalion, C.E.F., has been entrusted to the McGill Contingent, Canadian Officers' Training Corps, according to an announcement received by the Commanding Officer, Lieut.-Col. E. B. Q. Buchanan, from the Department of National Defence some weeks ago. The McGill C.O.T.C. took an important part in raising and officering the 148th Battalion and it is appropriate that the University unit, the senior of its kind in Canada, should be the first to preserve the traditions of an Expeditionary Force battalion. As a result of the announcement, the official title of the McGill Corps will in future include in brackets the words "148th Battalion, C.E.F."

DUCTLESS GLANDS

Ductless glands and their product, hormones, were the subjects of an address delivered in Montreal to a meeting of the Canadian Institute of Chemistry by J. B. Collip, Professor of Bio-Chemistry, in April. Dr. Collip described some of the work being done in this field at McGill and paid a warm tribute to members of his Department, notably to Dr. Evelyn Anderson, of the University of California, Dr. Hans Selye, of Prague, Dr. J. S. L. Browne, of McGill, L. Pugsley, of McGill, M. K. McPhail, of Vancouver, and to his assistant, Dr. D. L. Thomson.

ANNUAL ATHLETIC DINNER

With Sir Arthur Currie present, the second annual athletic dinner of McGill University was held in the Union on April 9. McGill teams won fewer intercollegiate championships than in the virtual sweep of last year, nevertheless the season was commendable and Sir Arthur congratulated the players on worthily upholding McGill's reputation for courage and sportsmanship. The Reverend Errol Amaron, winner of more senior "M's" than any other athlete in McGill's history, proposed the toast to the winners of this year's "M's" and team trophies were presented by Tom Graydon and Bill Gentleman. At the close of the dinner it was announced that Maurice Powers would captain the McGill Hockey Team next year.

Births

BAKER—In Ottawa, on September 23, 1931, to Massey Baker, Sci. '13, and Mrs. Baker, a son.

CARSON—In Montreal, on May 4, to Dr. Rae Carson, Dent. '27, and Mrs. Carson, a son.

CHARLAND—In Montreal, on March 12, to Dr. W. E. Charland, Dent. '26, and Mrs. Charland, a son.

COHEN—In Montreal, on April 3, to Horace R. Cohen, Arts '18, and Mrs. Cohen, a son.

CROZIER—On April 17, to Dr. and Mrs. Robert Crozier (Carman Code, Arts '29), of Shawinigan Falls, a son.

CURRIE—In Montreal, on April 24, to George S. Currie, Arts '11, and Mrs. Currie, a daughter.

EDWARDS—In Ottawa, on March 18, to G. Maxwell Edwards, Sci. '20, and Mrs. Edwards (Mary Elizabeth Currie, Arts '16), a daughter.

FAY—In England, on May 16, 1931, to Edgar S. Fay, Arts '29, and Mrs. Fay, a son.

GRAHAM—In North Vancouver, on December 20, 1931, to Dr. R. H. Carson Graham and Mrs. Graham (Gladys Mills, Arts '21), a daughter.

HODGSON—In Montreal, on April 12, to J. A. Hodgson, Sci. '17, and Mrs. Hodgson (Anne C. Hyde, Arts '30), a daughter.

HUGHES—In Montreal, on April 8, to H. Gordon Hughes, Arch. '26, and Mrs. Hughes, a daughter.

HUTCHISON—In Montreal, on March 1, to M. H. Hutchison, past student, and Mrs. Hutchison, a daughter.

KNOWLTON—In Montreal, on March 24, to Paul H. Knowlton, 'Sci·'27, and Mrs. Knowlton (Isabel Nixon, Arts '28), a son.

MATHEWSON—In Montreal, on March 15, to S. J. Mathewson, Sci. '15, and Mrs. Mathewson, a son.

MATHEWSON—In Montreal, on March 15, to S. J. Mathewson, Sci. '15, and Mrs. Mathewson, a son.

McCRACKEN—In Toronto, on April 22, to E. G. McCracken, Sci. '24, and Mrs. McCracken, a daughter.

McGILL—In Montreal, on March 17, to Frank S. McGill, past student, and Mrs. McGill, a son.

PUDDICOMBE—On May 6, to George Beverly Puddicombe, Arts '23, Law '26, and Mrs. Puddicombe (Ann Fogg, Arts '28), of Montreal, a daughter.

ROSS—In Montreal, on February 17, to Dr. Albert Ross, Med. '14, and Mrs. Ross, a son.

RYAN—In Montreal, on March 2, to Edward A. Ryan, Sci. '12, and Mrs. Ryan, a daughter.

RYLEY—In Montreal, on March 14, to A. St. C. Ryley, Sci. '10, and Mrs. Ryley, a daughter.

SIMPSON—In April, in Montreal, to Dr. Robert Geoffrey Simpson, Dent. '28, and Mrs. Simpson (Katherine Gilmour), a daughter.

TIMMIS—In Montreal, on March 16, to Harold G. Timmis, Sci. '24, and Mrs. Timmis (Kathleen Canning, Arts '23), of Grand'Mere, P.Q., a son.

TWEEDIE—At Rockland, Ont., on March 17, to Dr. William C. Tweedie, Med. '20, and Mrs. Tweedie, a son.

WATSON—At Kingston, Ont., on March 24, to Dr. Edmond E. Watson, Sci. '26, and Mrs. Watson, a son.

YOUNG—In Montreal, on February 29, to Dr. Arthur W. Young, Med. '20, and Mrs. Young, twin daughters.

Marriages

ALEXANDOR-FREIMAN—In Ottawa, on January 4, Miss Dorothy Freiman, past student, and Bernard M. Alexandor, Arts '28, Law '31.

CARON-HARDING—In Montreal, on May 21, Miss Blossom Harding and Ray Caron, Law '31.

COHEN—In Ottawa, on February 6, Miss Florence Fannie Wiseman, of Brockville, Ont., and Joseph Cohen, Sci. '21, of Ottawa.

COLBY—In Montreal, on February 6, Miss Doris G. Colby, Arts '27 and the Rev. Frederick William Taylor, of Maryland, Que.

DAWES—At Verdun, Que., on April 16, Miss Kathleen Boulton and Rev. Charles H. Dawes, B.D., Arts '28, of Moulinette, Ont.

DAY—In Toronto, on March 2, Miss Effie Jane Jamieson and Rev. Frank J. Day, Arts '94, of Chicago.

GALLAY—In Montreal, on March 13, Miss Birdie Silver and Wilfred Gallay, M.Sc., Ph.D., Arts '28, of Ottawa.

HOLLAND—In Montreal West, on February 27, Miss Elizabeth A. Holland, Arts '31, and Andrew G. Bennett, of Calgary, Alta.

HOSKING—In Detroit, Michigan, on April 2, Miss Ruby Dorothy Young, of Montreal, and Dr. Fred. Smith Hosking, Med. '30, of Calumet, Mich.

SANGSTER—On June 20, 1931, Miss Muriel Sangster, B.Sc. '25, and William R. Whitehead, of Prince Edward Island. Mr. and Mrs. Whitehead now reside in Quebec.

SMITH—At Buenos Aires, on April 27, Miss Isobel Price, of Quebec, and Robert Guy Carrington Smith, Com. '31, of Buenos Aires.



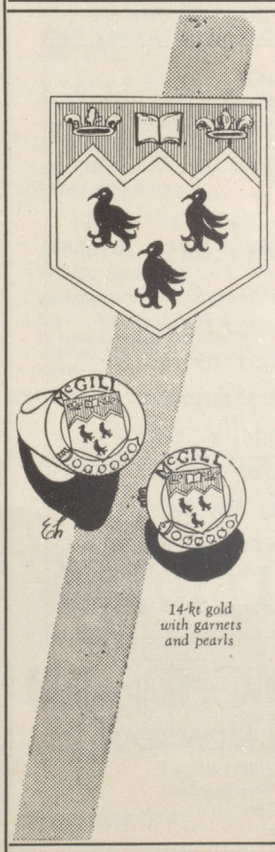
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Personals

"THE McGILL NEWS" welcomes from graduates personal items for inclusion in these columns. Press clippings or other notices should be addressed to H. R. Morgan, Esq., Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal.

DR. R. TAIT McKENZIE, Arts '89, Med. '92, LL.D. '21, has accepted the invitation of the Art Commission of the Olympic Games to present a retrospective exhibit of his work in sculpture in Los Angeles this summer. A special gallery has been reserved by the Commission for the purpose and about forty pieces of an athletic character will be displayed.

G. E. BELL, Sci. '07, has been appointed London Manager of Deloro Smelting & Refining Co. Ltd., 14 Waterloo Place, London, S.W.1., England.

J. J. CREELMAN, K.C., Class Secretary, Law '07, reports that a 25th Anniversary Dinner of the Class was held in the Mount Royal Club, Montreal, on May 2nd, those attending being the Hon. J. H. Dillon, K.C., Edgar R. Parkins, K.C., Harold E. Walker, K.C., and the Secretary Arthur Girouard, K.C., of Thetford Mines, the only remaining member of the class, was unable to be present.

DR. OSKAR KLOTZ, Med. '06, Professor of Pathology at the University of Toronto, was the guest of honour of the McGill Society of Toronto on March 14 at a luncheon, attended by 65 McGill men, in the Royal York Hotel.

DR. G. GAVIN MILLER, Med. '22, and members of his family escaped injury on May 2, when their home in Westmount was badly damaged by a gas explosion in the basement.

PROFESSOR J. T. CULLITON, of the Department of Economics, sailed from Canada in May on a 24,765-mile tour of the British Empire, during which he will study the Empire's economic conditions.

ESTHER L. RYAN, Arts '06, has been granted furlough from missionary work in Japan and sailed for Canada in April. She expects to spend some time at her home, 81 Homewood Avenue, Toronto.

A. W. McMASTER, Sci. '00, has been elected President of the Rotary Club of Montreal, to take effect on July 1.

DR. D. H. STOUGHTON, Med. '18, is now specializing in skin diseases, with offices at 247 South Whitney Street, Hartford, Conn.

LEON EDEL, Arts '27, M.A. '28, has been awarded the degree of Docteur-es-Lettres by the University of Paris. He is the first English-speaking Canadian to receive this degree, and is to be congratulated on attaining it after three years' work, in contrast to the seven years usually required. His main thesis was entitled "Henry James, Les Années Dramatiques."

DOROTHY OSBORNE, B.Sc. (Arts) '30, has received the degree of Ph.D. from Montpelier University, France, and is now pursuing further studies, under Lord Rutherford, in the Cavendish Laboratories, Cambridge University.

ROBERT S. PEERS, Med. '30, has opened an office for the practice of general medicine in Oakland, California.

JAMES F. CLARK, Com. '32, has been awarded the $1,000 Graduate Fellowship in Economics of the Royal Bank of Canada, for his essay entitled "Prince Stabilization," and will proceed to the degree of Master of Commerce at McGill in the coming year.

DR. W. H. HATCHER, Associate Professor of Chemistry, and S. E. Whitnall, Robert Reford Professor of Anatomy, were in April elected Fellows of the Royal Society of Canada.

F. A. ECHLIN, Med. '31, has been awarded the Delta Upsilon War Memorial Scholarship of $900 for the coming year and will leave the Royal Victoria Hospital, Montreal, to continue studies in surgery at Johns Hopkins University, Baltimore, and in New York City.

DR. WILLIAM WAUGH, Med. '72, on March 28 celebrated the 60th anniversary of his graduation. Dr. H. O. Howitt, Med. '04, represented McGill at a dinner tendered to Dr. Waugh in London by his colleagues on the staff of the University of Western Ontario.

DR. DANIEL LEMAY, Vet. '90, has been placed on the retired list of the United States Army, with the rank of major, and resides in Leavenworth, Kansas.

E. LIONEL JUDAH, Curator of the University Museums, has been elected Chairman of the Technical Section of the American Museums Association.

H. CARL GOLDENBERG, Arts '28, M.A. '29, Law '32, has been appointed Sessional Lecturer in Economics, vice Professor John Culliton, on leave.

THE GUY DRUMMOND FELLOWSHIP for this year will be shared by Kenneth Baker and Henry Heuser, Arts '32, who will study at the Ecole Libre des Sciences Politiques, Paris, and later return to McGill for their M.A.'s.

EDGAR S. FAY, Arts '29, recently received an Honours B.A. from Cambridge University and was awarded a prize of 100 guineas by the Inner Temple.

THE LONG SERVICE MEDAL has been granted to Lt.-Col. A. L. S. Mills, D.S.O., Law '14, of the Black Watch of Canada, and to Major L. C. Montgomery, Med. '20, of the C.A.M.C.

REV. DR. M. W. GOODRICH, Arts '14, is now pastor of the United Church at Belmont, Ont.

DR. F. B. CARRON, Med. '96, has been elected the first president of the Medical Society of Brockville, Ont., with Dr. A. H. Judson, Med. '04, as vice-president.

REV. DR. J. H. MACVICAR, Arts '85, has become pastor of Wesley United Church, Mimico, Ont.

REV. DR. R. C. BLAGRAVE, Arts '02, rector of St. John's Church, Peterborough, Ont., has been appointed Archdeacon of Peterborough.

B. R. HOOPER, Sci. '17, is now Assistant Superintendent of Ordinary Agencies with the London Life Insurance Company, at London, Ont.

DR. JACOB VINER, Arts '14, Professor of Economics at the University of Chicago, now generally regarded as an authority on international trade, finance, and economic theory, was the guest of honour at a luncheon of the Chicago branch of the English Speaking Union at which he was the speaker. He was at Geneva in 1913 as official American Economist and has been connected with the University of Chicago since 1921.

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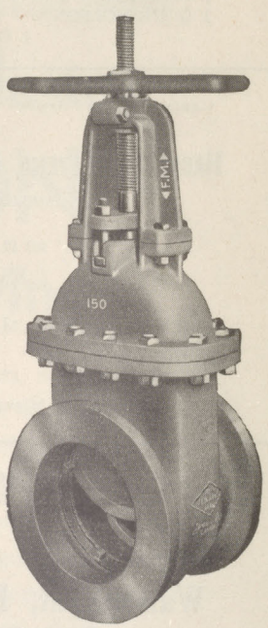


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WHEN IMPASSABLE ROADS recently prevented him from reaching a fishing village, where a young girl lay seriously ill, Dr. Victor O. Mader, Med. '23, an enthusiastic amateur aviator, flew to the village and dropped a package of medicine a few feet from the door of the girl's home.

L. DANA WILGRESS, Arts '14, Canadian Trade Commissioner in Hamburg, has been recalled to Ottawa to occupy a post with the Department of Trade and Commerce.

L. ST. J. HASKELL, Sci. '07, has been elected first vice-president of the Electrical Club of Montreal, the retiring president of which is A. J. Soper, Sci. '09.

EARLE S. SPAFFORD, past student, a director of the Imperial Tobacco Company, Montreal, since January 1, 1931, has been appointed vice-president of the company. He was formerly vice-president of the Tuckett Tobacco Company, Hamilton, Ont.

GEORGE A. WALKEM, Sci. '96, who has represented Point Grey and Vancouver City in the British Columbia Legislature for the past eight years, has announced his retirement from public life.

WINCHESTER H. BIGGAR, Arts '20, Law '21, has been re-elected a member of the Montreal City Council, representing Notre Dame de Grace ward.

RT. REV. J. F. SWEENY, Arts '78, LL.D. '21, Senior Bishop of the Anglican Ecclesiastical Province of Ontario, has been chosen Archbishop and Metropolitan of that ecclesiastical province, succeeding the late Archbishop Williams.

DR. C. M. HIGGINSON, Vet '91, of Hawkesbury, Ont., has been re-elected president of the Central Canada Veterinary Association.

DR. H. H. PITTS, Med. '18, of Vancouver, B.C., was one of those who prepared and presented a paper on carcinoma of the liver to the American College of Physicians in session in San Francisco.

DR. W. K. ROSS, Med. '83, on reaching the age of superannuation, has retired from the Ontario hospital service after a connection dating from 1890. Latterly in charge of the provincial institution in Toronto, he was formerly superintendent at Kingston, Brockville and Penetanguishene and is recognized as one of the foremost psychiatrists in Ontario. He was tendered a complimentary dinner on his retirement.

THE MONTREAL PRESBYTERIAN COLLEGE has conferred the honorary degree of Doctor of Divinity upon Rev. L. D. Anderson, Arts '92, of Beauharnois, Que.; Rev. George A. MacLennan, Arts '85, of Montreal; and Rev. Norman A. MacLeod, Ph.D., Arts '92, of Brockville. Dr. MacLeod delivered the address to the graduating class.

W. G. WRIGHT, Sci. '13, is now general manager of the Canadian Frigidaire Corporation.

REV. DR. W. G. BROWN, Arts '99, moderator of the Presbyterian Church in Canada, represented that body at the diamond jubilee of the North Formosa Mission.

THE VENERABLE JOHN PATERSON-SMYTH, who died in Montreal on February 15, was the father of Rev. Charles Paterson-Smyth, B.D., Arts '10, of Syracuse, N.Y.; of Mrs. H. A. Wilson, (Marjorie Paterson-Smyth, Arts '11) of Houston, Texas; Mrs. A. L. Hughes, (Jessie Paterson-Smyth, Arts '19), of St. Louis, Mo.; and of Dr. Geoffrey N. Paterson-Smyth, Med. '27, of Montreal.

P. L. NAISMITH, Arts '88, Sci. '89, of Victoria, B.C., has been re-elected vice-president of the Canadian Colonization Association.

THE MEMORIAL presented to Canada by Canadians living in the United States was unveiled in the Parliament Buildings at Ottawa on February 6, by the Governor-General. The work of Dr. R. Tait McKenzie, Arts '89, Med. '92, LL.D. '21, it was formally presented to the Dominion by W. W. Colpitts, Sci. '99, LL.D. '21, chairman of the committee which promoted the undertaking.

REV. DR. E. I. REXFORD, Arts '76, has been elected president of the Corporation of the School for Crippled Children, Montreal.

DR. WARREN S. LYMAN, Med. '03, of Ottawa, has been appointed chairman of a special committee of the Ontario Medical Association which will study cancer and report to the Provincial Minister of Health. Dr. E. R. Secord, Med. '00, Brantford, is a member of the Committee.

REV. J. M. ALMOND, C.M.G., past student, has been appointed Archdeacon of Montreal.

DR. DAVID H. BALLON, Arts '08, Med. '09, of Montreal, and Dr. Ambrose L. Lockwood, Med. '10, of Toronto, attended the meeting of the American Association of Thoracic Surgeons at Ann Arbor, Mich., in April.

A. J. R. PARKES, Arts '17, of Montreal, has been elected first vice-president of the Life Underwriters' Association of Canada.

Alumnæ Notes

Miss Hurlbatt has returned to Montreal, and is staying at the University Women's Club, 3492 Peel Street.

1904—Mrs. G. S. Raphael (Euphemia McLeod) has been elected President of the Vancouver Parent-Teacher Federation and also 1st Vice-President of the Provincial Federation.

1911—Mrs. A. H. Sovereign (Ellen Ellison) is leaving Vancouver to make her home in Dawson, Y.T. Her husband, formerly of St. Mark's Church, Vancouver, has been made Bishop of the Yukon, with headquarters in Dawson.

1915—Dr. Jessie Boyd Scriver and her husband, Dr. W. de M. Scriver, will spend the summer abroad in special medical work.

1916—Miss Margaret M. Cameron, of Saskatchewan University, will attend the International Federation of University Women's Convention in Edinburgh this summer.

1919—Miss Elizabeth Monk has been elected President of the University Women's Club of Montreal.

1921—Mrs. Joseph E. Hulse (Ethelwyn Holland) with her husband and two children has returned from China on a six-month holiday and is visiting in Canada and the United States.

1927—Mrs. W. S. Caldwell (Marguerite Benny, Arts '27) recently gave a paper on "Cataloguing and Public Libraries" at a meeting of the American Library Association in New Orleans. Mrs. Caldwell is Librarian of Canadian Industries Limited, Montreal.

Miss Maud Martin, Arts '27, Librarian of the Royal Bank of Canada, has been elected Vice-President of the recently formed branch of the Libraries Association in Montreal.

Miss Isabel F. Craig, of the McCord Museum at McGill, attended the Museums Convention in Boston in May.

1928—Mr. and Mrs. Drummond Giles (Eleanor T. Brooks), formerly of Toronto, have now taken up residence in Montreal.

1929—Miss Polly Wetmore is spending the summer in Europe.



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Personals

DR. W. G. HEPBURN, Med. '10, has retired from the position of port doctor at Montreal to enter into practice at Pembroke, Ont.

THE COLONIAL AUXILIARY FORCES OFFICERS' DECORATION has been conferred upon Lieutenant-Colonel R. L. Calder, M.C., Law '06, of the Canadian Militia.

Deaths

ALEXANDER, REV. JAMES LAMBERT, D.D., past student, at Hamilton, Ont., April 23, 1932.

ANGLIN, JAMES PENROSE, Sci. '06, of Montreal, at Lanthier, P.Q., May 15, 1932.

BAIRD, DR. THOMAS A., Med. '85, in Bay City, Michigan, April 27, 1932.

BAKER, DR. AUSTIN HART, Vet. '76, in Chicago, February 10, 1932.

BAYNES, DR. DONALD, Arts '64, M.A. '67, M.D. '76, in London, England, May 6, 1932.

BAYNES, DR. GEORGE AYLMER, Med. '69, at Snohomish, Wash., April 12, 1932.

BLACKADER, DR. ALEXANDER DOUGALL, Arts '70, Med. '71, M.A. '18, LL.D. '21, in Montreal, March 14, 1932.

BUTLER, LIEUTENANT-COLONEL THOMAS PAGE, D.C.L., Law '65, in Westmount, Que., March 31, 1932.

DEWAR, DR. ALEXANDER, Med. '91, in London, England, March 19, 1932.

EWING, REV. WILLIAM, D.D., Arts '78, at Claremont, Cal., January 10, 1932.

FORNERET, VICTOR FREDERICK WILLIAM, Sci. '87, in Toronto, April 19, 1932.

FOX, CHARLES A., Sci. '11, in Toronto, December 12, 1931.

GILMOUR, SUTHERLAND C., past student, in Ottawa, February 14, 1932.

GRIER, ARCHIBALD EDWARD, past student, in Westmount, Que., March 1, 1932.

HALL, RICHARD, Sci. '78, in Vancouver, B.C., February 20, 1932.

KIRBY, DR. WELDON PALMER, Med. '08, in Moncton, N.B., May 22, 1932.

LAIDLEY, DR. ISAAC HENRY, Med. '97, in Montreal, March 23, 1932.

LIGHTSTONE, DR. BERNARD, Dent. '12, in Montreal, April 15, 1932.

LOISELLE, REV. HENRI OCTAVE, past student, in Montreal, February 12, 1932.

MACDONALD, DR. ROBERT TYRE, Med. '81, in Montreal, February 23, 1932.

MACLARTY, GORDON BERTRAM, past student, in Ottawa, April 10, 1932.

McALISTER, DR. DUNCAN HAMILTON, Med. '98, at Sussex, N.B., March 6, 1932.

McGUIRE, GORDON A., Sci. '08, in Toronto, March 1, 1932.

McOUAT, JOHN WALTER, Arts '86, at Lachute, Que., February 26, 1932.

McPHEE, DR. THOMAS J., in Nanaimo, B.C., December 20, 1931.

MELDRUM, ROBERT HUNTER, past student, in Montreal, March 5, 1932.

MITCHELL, VICTOR EVELYN, K.C., Law '96, in Montreal, May 29, 1932.

MOLSON, KENNETH, Arts '96, in Montreal, April 9, 1932.

NOBLE, DR. ERMY C., Med. '07, at Randolph, Vermont, October 21, 1931.

PARENT, REVEREND MANASSE B., Arts '84, at St. Pie de Bagot, P.Q., March 19, 1931.

PHELAN, DR. C. J. F., Med. '65, at Cartierville, P.Q., April 10, 1929.

SCOTT, REV. DANIEL JOHN, past student, California, March 7, 1932.

WATERSTON, EDWARD JAMES, Arts '08, Law '11, in Westmount, Que., March 25, 1932.

McGill University Library

Congratulations

The congratulations of the President and Members of the Executive of the Graduates' Society have been forwarded to the following graduates of 1882, who received their McGill degrees just fifty years ago:

Arts

BARRON, REV. T. J.
HAGUE, HENRY J.
LAFLEUR, DR. HENRI A.
MACKAY, REV. DANIEL
MARTIN, REV. A. W.
MORIN, REV. JOSEPH L.
TRENHOLME, CHAS. W.
WHILLANS, REV. GEORGE

Medicine

CHRISTIE, DR. EDMUND
DERBY, DR. W. J.
DUNLOP, DR. A. H.
GALE, DR. HUGH M.
GRANT, DR. JAMES A.
O'KEEFE, DR. HENRY
RUTHERFORD, DR. CLARENDON
THOMPSON, DR. WM. EDWARD

Science

FOSTER, PHILIP L.
GREEN, THOS. DANIEL
LOW, ALBERT P.
WADDELL, DR. J. A. L.

Law

GOLDSTEIN, MAXWELL
KLOCK, ROBERT A.
LIGHTHALL, GEORGE R.
MORGAN, EDWARD A. D.
WHITE, WILLIAM JNO.

Personals

MRS. WILLIAM BIRKETT, who died in Montreal on May 5, at the advanced age of 102 years, was the mother of Dr. H. S. Birkett, C.B., Med. '86, former Dean of the Faculty of Medicine at the University.

HENRY M. ESTALL. M.A., Arts '30, has been awarded the Susan Linn Sage Fellowship in Philosophy of Cornell University.

ALTHOUGH IN CALIFORNIA there is no branch of the Graduates' Society, McGill has many alumni in the State. A group of these and others gathered in San Francisco on March 31, to honour Professor J. C. Meakins, of the Faculty of Medicine. A dinner was held at the University Club, among those present being Drs. H. Woolsey and J. V. Leonard, of the University of California; R. S. Stone, Toronto '24; C. B. Bowen, Western '22, A. Thibodeau, Montreal '03, C. C. Connor, formerly acting pathologist at the Montreal General Hospital; while the McGill graduates numbered M. C. Craig '86, A. W. McArthur '96, E. C. Fabre-Rajotte '99, E. H. Falconer '11, J. M. Frawley '19, R. C. Leggo '19, C. F. Fluhmann '22, M. L. Stauffer '27, R. S. Peers '30, M. B. Gibbons, Jr. '30, R. F. Legge '30, and J. M. Dunphy '30.

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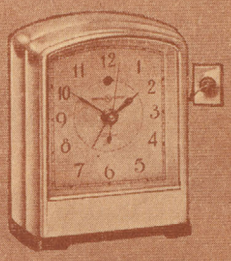
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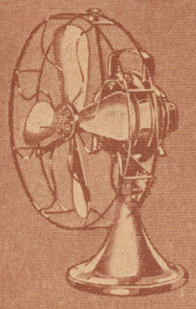
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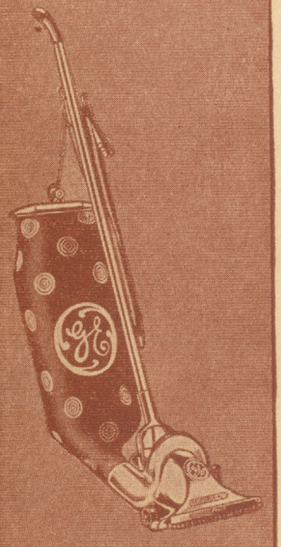
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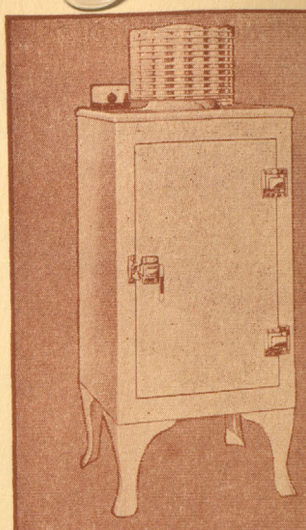
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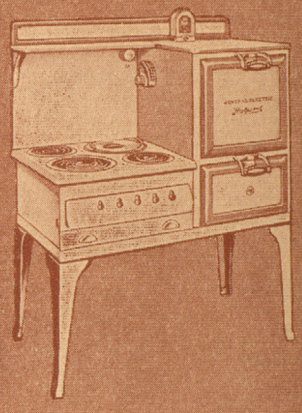
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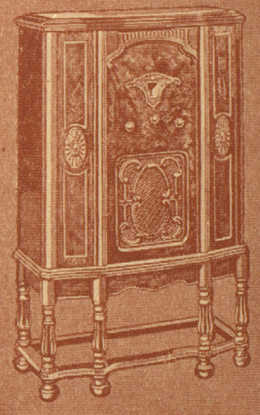


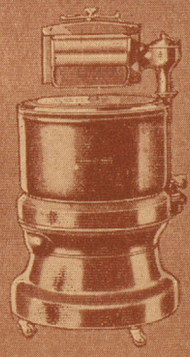












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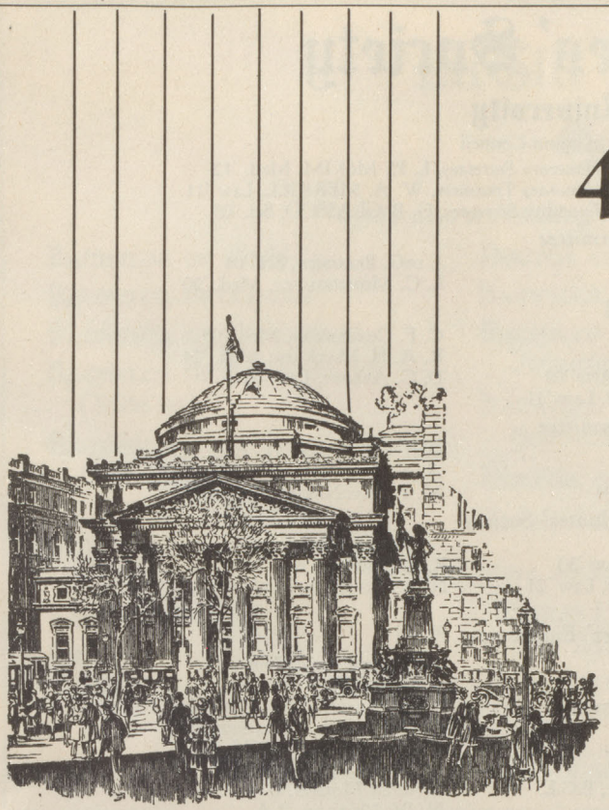
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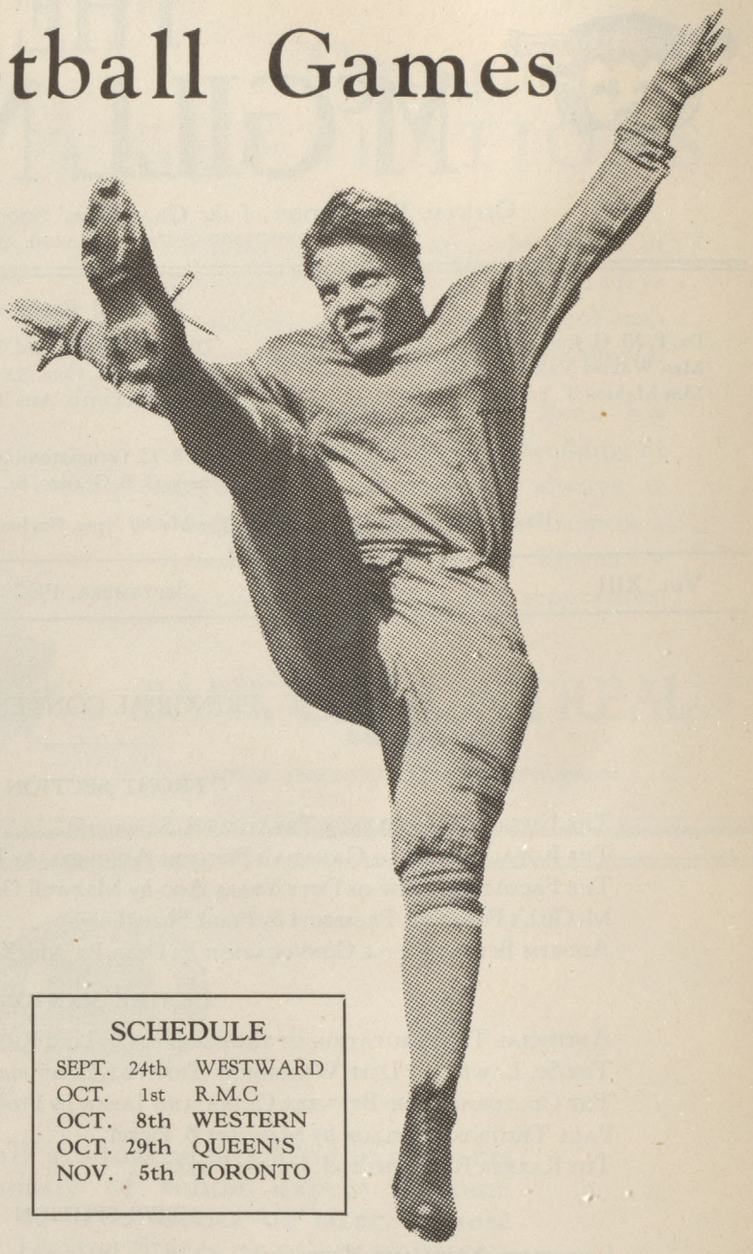
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THE UNITED KINGDOM DELEGATION TO THE IMPERIAL CONFERENCE, 1932

This photograph, taken on board the *Empress of Britain*, shows from left to right: (Seated), the Rt. Hon. J. H. Thomas, the Rt. Hon. Stanley Baldwin, the Rt. Hon. Neville Chamberlain. (Standing), the Rt. Hon. Sir Philip Cunliffe-Lister, Lord Hailsham, the Rt. Hon. Walter Runciman, and the Rt. Hon. Sir John Gilmour.

The Imperial Conference, 1932

AS THE RESULTS ACHIEVED BY THE IMPERIAL CONFERENCE OF 1932 WILL BE A SUBJECT OF DEEP INTEREST IN THE MONTHS TO COME, *The McGill News* TAKES PLEASURE IN PRESENTING THE FOLLOWING SUMMARY OF THE CANADIAN GOVERNMENT'S AGREEMENTS

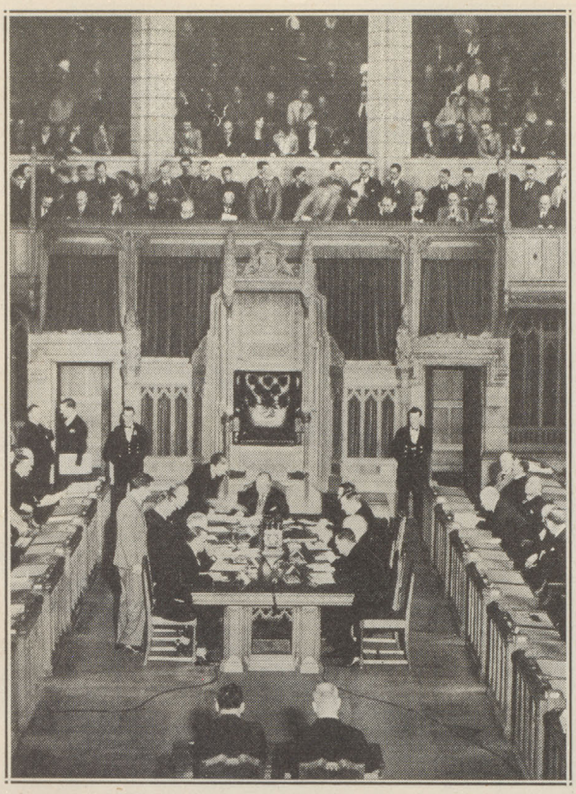
IN the House of Commons of the Dominion Parliament, Ottawa, there were signed on Saturday, August 20, 1932, the following intra-Empire trade treaties:

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United Kingdom—South Africa
United Kingdom—New Zealand
United Kingdom—India
United Kingdom—Newfoundland
United Kingdom—Southern Rhodesia
United Kingdom—Canada
Canada—Irish Free State
Canada—South Africa
Canada—Southern Rhodesia
South Africa—Irish Free State
New Zealand—South Africa

UNITED KINGDOM—CANADA

The agreement between His Majesty's Government in the United Kingdom and His Majesty's Government in Canada, signed on behalf of the United Kingdom by the Right Honourable Neville Chamberlain and on behalf of the Dominion of Canada by the Right Honourable R. B. Bennett, comprises 23 articles, which may be summarized as follows:

Article 1—His Majesty's Government in the United Kingdom undertakes continuance after November 15, 1932, of entry free of duty into the United Kingdom of goods which, under the Import Duties Act, 1932, are free at the present time. This undertaking is subject to a reservation set down in Schedule A, which states in regard



—Canadian Government Photo

SIGNING THE IMPERIAL AGREEMENTS

The Right Hon. R. B. Bennett, Prime Minister of Canada, and leaders of the Empire delegations are here seen signing their agreements in the House of Commons, Ottawa, on Saturday, August 20, 1932.

to eggs, poultry, butter, cheese, and other milk products that free entry will be maintained for three years, the British Government, at the end of three years, being at liberty to effect modification of the arrangement if the interests of the United Kingdom producer so require.

Article 2—His Majesty's Government in the United Kingdom undertakes to invite Parliament to pass duties on foreign goods, as set forth in Schedule B. Schedule B includes the following:

Wheat in Grain—2 shillings per quarter.
Butter—15 shillings per cwt.
Cheese—15 per cent. *ad valorem*.
Apples (raw)—4s 6d per cwt.
Pears (raw)—4s 6d per cwt.
Apples (canned)—3s 6d per cwt., plus duty in respect of sugar content.
Dried Fruits—10s 6d per cwt. (present duty 7s.)
Eggs in Shell—1s to 1s 6d per great hundred, according to weight.
Condensed Milk—5s per cwt., plus duty in respect of sugar content.
Copper—2d per lb. (Unwrought, refined or not, ingots, bars, blocks, slabs, cakes and rods.)

Article 3—His Majesty's Government in the United Kingdom undertakes that the existing 10 per cent. *ad valorem* duties on the foreign goods noted in Schedule C shall not be reduced without the consent of His Majesty's Government in Canada. Schedule C comprises:

Timber (of all kinds imported in substantial quantities from Canada, and now dutiable).
Fish (fresh, sea. Canned Salmon. Other canned fish).
Minerals (Asbestos, Zinc, Lead).

Article 4—Provides that the duty on wheat in grain, copper, zinc, and lead may be removed if at any time Empire producers of these commodities are unable or unwilling to offer them in the United Kingdom at prices not exceeding world prices and in quantities sufficient to supply the requirements of United Kingdom consumers.

Article 5—Deals with modification of the existing conditions on which Canadian live cattle may be imported into the United Kingdom, such modification to be presented for ratification to the British Parliament.

Article 6—The United Kingdom to regulate, as soon as possible, the pig industry. In any regulations submitted to Parliament in regard to importations, provision to be made for the free entry of Canadian bacon and hams of good quality, up to a maximum of 2,500,000 cwt. per annum.

Article 7—For ten years British Empire tobacco, grown, produced, or manufactured in Canada, to receive the preference in the U.K. at present existing. Provision is made for amendment of the rate of preference in the event of the duty on foreign unmanufactured tobacco falling below 2s ½d per lb.

Article 8—The United Kingdom Government undertakes to invite the Governments of the non-Self-Governing Colonies and Protectorates, with certain exceptions in South Africa, where agreements already exist, to accord to Canada any preferences accorded to any other part of the British Empire. Schedule D, covering the preferences referred to in this article, is not at present being made public.

Article 9—His Majesty's Government in Canada undertakes to effect customs duty changes in accordance with Schedule E. Schedule E, of which details have not yet been published, sets forth 220 items in respect of which new or increased margins of preference will be granted by Canada to the United Kingdom. The list contains items which may be classified under the headings—iron and steel, cutlery, machinery, wire products, cotton and woollen fabrics, chemicals, flat glass, toilet accessories, gums, tableware and leather. As mentioned previously, the details of these items have not yet been published.

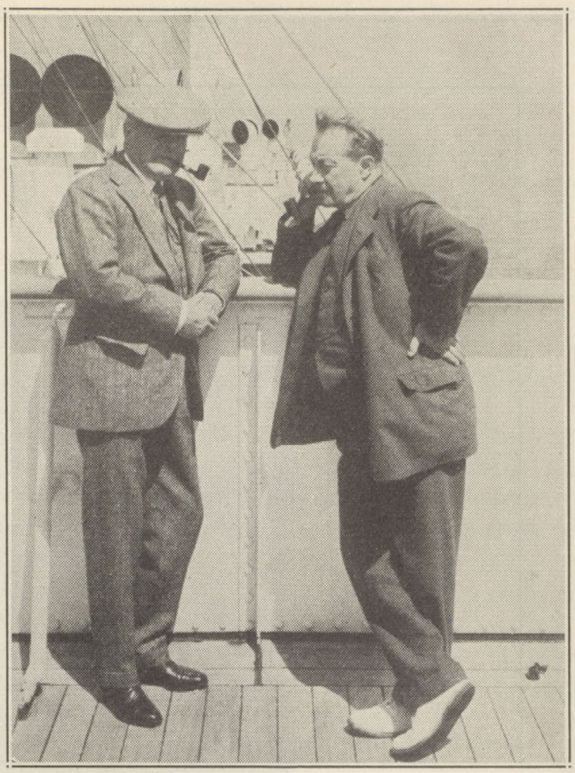
McGill University Library

Article 10—His Majesty's Government in Canada undertakes that protection by tariffs against the United Kingdom shall be afforded only to those industries in Canada which are reasonably assured of sound opportunities for success.

Article 11—His Majesty's Government in Canada undertakes that, during the currency of the agreement, the Canadian tariff shall be based on the principle that duties shall not exceed such a level as will give the United Kingdom producers full opportunity of reasonable competition on the basis of the relative cost of economical and efficient production. Special consideration for Canadian industries not fully established is explicitly allowed.

Article 12—His Majesty's Government in Canada undertakes forthwith to constitute the Tariff Board, provided for in the Tariff Board Act, 1931.

Article 13—Provides for review by the Tariff Board, at the request of the United Kingdom, of any tariff appearing to contravene the principles enunciated in Article 11. The Canadian Government upon receipt of the Tariff Board's report, undertakes to invite Parliament to amend the tariff in a manner to give effect to the principles mentioned.



—C.P.R. Photo

ON THE *EMPRESS OF BRITAIN'S* BRIDGE

E. W. Beatty, K.C., President of the Canadian Pacific Railway and Chancellor of McGill University, and the Right Honourable Stanley Baldwin, Lord President of the United Kingdom Council, on the bridge of the Liner which brought the British delegates to the Imperial Conference.



—C.P.R. Photo

BRITISH DELEGATES ON THE *EMPRESS*

Mr. Baldwin, leader of the United Kingdom's delegates to the Imperial Conference, Ottawa, and Lord Burghley, M.P., captain of the team representing Great Britain in the Olympic Games at Los Angeles.

Article 14—Provides that no existing tariff on United Kingdom goods shall be increased, except upon the Tariff Board's recommendation.

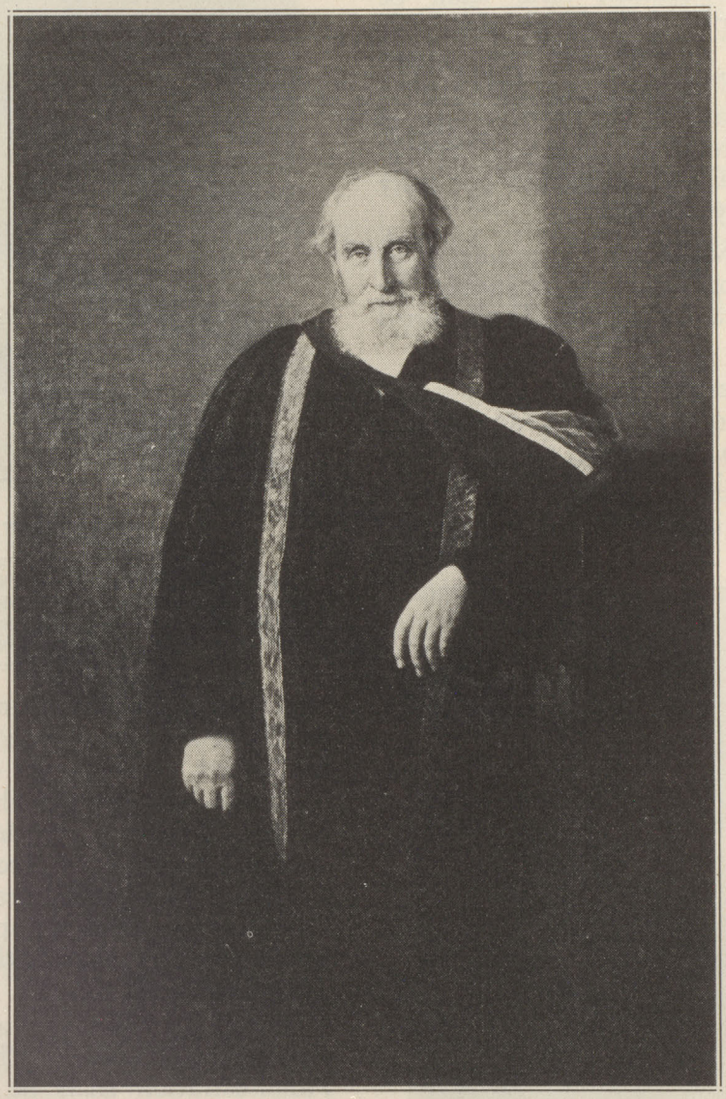
Article 15—Establishes the right of United Kingdom producers to appear before the Tariff Board in connection with matters arising from Articles 13 and 14.

Article 16—Provides an undertaking by the Dominion Government that Canadian Customs Administration shall be governed by (1) the avoidance so far as possible of uncertainty as to the amount of duties payable upon the arrival of goods in Canada, (2) the reduction of delay to a minimum, and (3) the provision of machinery for the prompt and impartial settlement of disputes.

Article 17—The Dominion Government undertakes to abolish all existing surcharges on United Kingdom goods as soon as the finances of Canada will allow; also to give sympathetic consideration to reducing, and ultimately abolishing, the existing exchange dumping duties.

(*Continued on Page 19*)

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SIR WILLIAM DAWSON

Principal of McGill University 1855–1893, and first President of the Royal Society of Canada, 1882.

The Royal Society of Canada's Fiftieth Anniversary

By DEAN A. S. EVE

THE Royal Society of Canada is so interwoven with the intellectual life and progress of the Dominion that the celebration of its fiftieth anniversary, held last May at Ottawa, is a landmark in Canadian history. The Society owed its inception largely to the Duke of Argyle, then Governor-General of Canada, and to Sir William Dawson, at that time Principal of McGill University. It was not a mere copy of the Royal Society, inasmuch as there were two literary sections, as well as two sections (now three) devoted to Natural Philosophy, Geology, and Biology. The language of the first section is French, and of the second section English. These sections are alike devoted to the humanities in the widest sense, letters, history, philosophy, economics, and political science.

There was a special interest in the Jubilee of the Royal Society of Canada inasmuch as all the meetings were held, for the first time, in the spacious and efficient National Research Laboratory, which was nearing completion. When this laboratory is completed, equipped, and staffed, it will have an effect on the scientific and industrial life of Canada which will parallel that of the National Physical Laboratory in England, and of the Bureau of Standards in Washington. These are regarded as allies, and not rivals, of the great universities.

The progress of the Royal Society of Canada may be most accurately gauged by reading a remarkable book, issued on the second day of the meeting. This was an anniversary volume entitled "Fifty Years Retrospect," compiled by the President of the Society and the Presidents of the Sections, and ably edited by Mr. John Patterson. There are articles by twenty-five writers, and the book also includes the thoughtful, weighty, presidential address of Sir Robert Falconer, who has just retired as Principal of the University of Toronto. Sir Robert pointed out, as indicating a standard of quality, that nineteen members of the scientific sections had, during the fifty years under review, been also members of the Royal Society of London. This address, read on the opening night, combined scholarship, clarity, and constructive criticism.

Before the address the Prime Minister was elected an Honorary Fellow of the Society, and it was pointed out that his personal qualifications would warrant his election quite apart from the virtue of his office. The speeches were broadcast to fifteen radio stations, and an immense audience took an interest in the proceedings. It is noteworthy that Dr. J. S. Plaskett, the great Canadian astronomer, Director of the Astrophysical Observatory at Victoria, B.C., obtained an honorary LL.D. degree from McGill on the morning of May 26th at the Annual Convocation, and in the evening received the Flavelle Medal for Scientific Achievement from the Royal Society of Canada. The Lorne Pierce Medal (Literature) was presented to Dr. A. MacMechan; and the Tyrrell Medal (History) to Dr. P. Georges Roy.

The meeting was of peculiar interest on account of the presence of delegates from many famous societies and institutions, particularly those of Great Britain, France, and the United States. On the afternoon of Wednesday, May 25, McGill University was fortunate in hearing an address by Dr. A. N. Whitehead, mathematician and philosopher, on "Philosophy and Science." He proceeded to Ottawa as the representative of the British Academy, and, on Friday evening, spoke on the importance and the desirability of nationality, despite its obvious drawbacks.

On the second day, the annual luncheon at the Château Laurier was the occasion of speeches of a remarkably high order. The speakers included the Rt. Hon. R. B. Bennett and the Rt. Hon. W. L. Mackenzie King, both Fellows of the Royal Society of Canada and fully aware of the Society's worth and importance. Among the speakers was also the Master of Downing College, the eminent Cambridge botanist, Dr. A. C. Seward, who urged the importance of clear statements, in untechnical language, of all scientific results. He practises what he preaches, for the Cambridge University Press has just published his "Plants: What They Are and What



FRANCIS ERNEST LLOYD, M.A., F.R.S.C., F.L.S.
Macdonald Professor of Botany, McGill University, and President of the Royal Society of Canada, 1932.

They Do," declared to be limpid and fascinating. Moreover, his quotation "Haste comes from the Devil, leisure from God" evoked favourable response from some subsequent speakers. The spirited eloquence of Dr. T. Chapais, and the elegance of Dr. R. Lemieux, in his reply on behalf of l'Institut Français, of which he is a member, will not be forgotten by his privileged hearers.

On the last evening there was a dinner at the Country Club when addresses were made by Mons. G. Bouchard, Dr. A. N. Whitehead, Dr. J. M. Cattell (Editor of "Science"), Dr. A. S. Eve, Dr. H. M. Tory, and Archdeacon F. G. Scott. Emphasis was laid on the importance of the National Research Council and Laboratory, and on the marked increase of young men of ability, learning, and potentiality, ready and able to promote the scientific advancement and the industrial prosperity of the Dominion.

It is also noteworthy that Professor F. E. Lloyd, Director of the Department of Botany at McGill University, was elected President of the Society for the ensuing year.

Dr. A. Norman Shaw was President of Section III, and contributed an interesting summary of the growth of Physics in Canada to the anniversary volume; while Dr. J. B. Collip presided over the Biological Section, the youngest of all sections, having been created in 1918, but exceedingly vigorous and progressive.

An account such as the above covers only the public activities of the Society, a mere fraction of the whole. The bulk of the real work consists of hundreds of papers read and discussed at the sectional meetings. These provide the one occasion each year when men from various parts of this extensive Dominion can foregather, compare notes, record achievements, and discuss the problems on the border line of fresh discovery. The personal, intellectual contact in private discussion and small committees is often even more helpful, and more stimulating and refreshing, than the papers in the formal meetings.

In particular, on this occasion, many questions relating to the 1932 total solar eclipse, and plans for the various parties concerned, were discussed and arranged. The International Polar Year, beginning about September 1, 1932, is a scheme for a complete girdle of observers in the Arctic, round the North Pole, at suitable intervals, with a view to observing and recording conditions of weather, radio, magnetism, and northern lights, for a full twelve months, so that there may be better weather forecasting, also an increase of knowledge with improved technique, practical and scientific, both in radio and in magnetic developments.

The Royal Society of Canada and its members, after this successful celebration of the Society's Fiftieth Anniversary, undoubtedly go forward greatly heartened and encouraged; with increased prestige too in the opinion of their fellow countrymen, and in the estimation of the informed world at large.

The Eclipse

Owing to cloudy weather in Montreal, at Magog, P.Q., and other points where scientists had gathered, the total eclipse of the sun on August 31, 1932, was not viewed to great advantage. Fine weather prevailed at some points, however, notably at Sorel and Louiseville, P.Q. If results from these points should prove of interest, *The McGill News* hopes to present some account of them in the December number. Meanwhile, a striking photograph, taken at Sorel by S. J. Hayward, from the deck of the Canada Steamships S.S. *Richelieu*, appears on Page 47 of this issue.

The Faculty of Law of Fifty Years Ago

Eheu Fugaces, Labuntur Anni.

By MAXWELL GOLDSTEIN, K.C.

IT is at once pleasing and sad to attempt to picture conditions of a half century past, pleasing to recall the endearing associations made, and sad to record so few survivors. Of the seventeen graduates in Law of 1882 I fear that but four now remain, William J. White, K.C., George R. Lighthall, N.P., E. A. D. Morgan, K.C., and myself.

The Law Faculty of those days cannot be compared with that of to-day. The whole number of students attending the classes of the three years was in the neighbourhood of fifty. Then we had our sessions down town in a rather dingy room in the top storey (no elevator) of the Molson's Bank Building, at the corner of St. James and St. Peter Streets. Our hours of attendance were from 4 to 6 p.m., one hour for second and third years, and one hour for first year students, five days a week.

We were obliged to take our notes by the dim light of a gas jet, which did not reflect much glory upon the scene. But we were blessed with learned professors, all busy lawyers in active practice, who could not always spare the necessary lecture hour, and we students, as foolish as those who preceded and doubtless as those who followed us, thought it clever to "slope" as many lectures as we could, finally having to depend upon concentrated reading up in the last week or two before examinations, and to prod a more diligent comrade to give us a glimpse of his notes. In the pursuance of this youthful spirit we continued the senseless custom of asking questions wholly irrelevant to the lecture, to divert the professor's attention from his subject and to induce him, as in the case of Professor Trenholme, a man of most liberal tendencies and deeply impregnated with the ideal of political freedom, to talk to us on the ever-present Irish question—a special hobby of his—instead of the more dry but necessary law of the Romans.

Our sessions lasted from the beginning of October until the middle of March, and the course extended over a period of three years. The sessional fee was $20. It is now $205. Our convocation day was bracketted with the Science Faculty, and generally took place on the last day of March, in the old Molson Hall of the University, where we had previously written for our examinations. Some of us were really working students, i.e., we actually attended the offices of the advocates to whom we were articled, devoting our whole time to acquiring the procedure and court work, and to seeking discussion with our patrons upon the legal points which the cases of the day produced, thus properly earning the certificate of diligent attendance required as a condition precedent to our application for admission to the Bar, a practice which, according to present day traditions, is not always complied with.

Although separated from the students of other faculties by reason of our having our lecture room down town, we were imbued with the proper *esprit de corps*. We had our own jollifications including sleigh drives to Lajeunesse Hotel at Back River, piling into a large van, and making the night hideous with efforts to do justice to our College songs, and after participating in a generous collation served with beer, we indulged in dancing with our fellow-students, which naturally lacked the attraction afforded by partners of the other sex.

Then we had our joyous Faculty dinners after the sessional examinations to afford a vent for our exuberation at the end of our annual trials. We frequently patronized for this purpose the Grand Vatel, a well known restaurant on St. James Street, where with the assistance of invited guests from other Faculties and from our sister university, Laval, we spent our hours over an interesting menu, washed down with vintages of Sauterne, Claret, Burgundy and Champagne, and perhaps liqueur, returning home about 1 a.m. quite (?) sober, properly impressed with our own importance, and resolved as students always do, to assume charge in due course of the affairs of the country and set the world aright.

Our valedictories at Convocation were of the usual order, overflowing with expressions of pride in our University, thanks to our professors, and of assumed fears of the practical results of our coming venture into professional life.

To-day the Faculty regulations provide that no student under the age of 21 years is eligible for a degree. If that somewhat rigorous rule had been in effect fifty years ago, I would have had to wait for over two years after graduation to

be "capped." I modestly claim to have been the youngest graduate of the University.

The parchment witnessing the conferring upon me of the degree of "Baccaulaureatus in Jure Civili" is dated: "die tricesimo primo Mensis Martii Anno Domini MDCCCLXXXII, and bears the signatures (as written) of the following men—a noble roster—who have all passed over to the Great and Undefined Beyond:—

Carolus D. Day, D.C.L., LL.D., *Proeses et Cancellarius*
J. Gulielmus Dawson, LL.D., *Primarius*
Gulielmus H. Kerr, *Doc. Fac. Jur.*
N. G. Trenholme, M.A., B.C.L., *Prof. Jur. Rom.*
Leonidas H. Davidson, M.A., B.C.L., *Prof. Jur. Com.*
J. E. Robidoux, *Professor Juris Civilis.*
Edmond Lareau, B.C.L., *Prof. His. Leg.*
J. S. Archibald, *Prof. Juris Crim.*
M. Hutchinson, B.C.L., *Prof. Pro. Civ.*
Ludovicus A. Hart, M.A., *Prof. Juris Notariae*
Gulielmus C. Baynes, B.A., *Registrar.*

It is worthy of note that of the foregoing, Professor Trenholme became Judge of the Court of Appeal; Professor Archibald, the Chief Justice of the Supreme Court; and Professors Robidoux and Hutchinson Judges of the same tribunal.

In those days we had a University Literary Society, then a very modest association, meeting at times in the University Club adjoining St. James's Club, where the more serious students of all faculties gathered to read their essays upon subjects which had engrossed them, and to debate and settle the always existing serious problems of the world at large. I remember that such questions as "Is life worth living?" "Marriage with a deceased wife's sister" and kindred pressing topics of the day were fully considered and adjudged.

We, of course, had our photographs taken in gowns and hoods at graduation, by Notman's, exchanging our pictures with each other, in commemoration of our happy days together. It would be interesting to have a look at the old familiar features to-day.

Our three years' course brought us into communion with the students of the classes of the two years prior and the two years subsequent to our entry and graduation, and during those years, 1880–1884, there graduated many men who came to excel in their profession and filled high judicial and other offices. Among others I recall the following:—

Albert W. Atwater, *Treasurer Province of Quebec*
Eugene Lafleur, *Eminent Advocate and Leader of Canadian Bar*
Robert S. Weir, *Recorder of Montreal*
Alexander S. G. Cross, *Judge of the Court of Appeal*
George G. Foster, *Senator*
Edmund P. Guerin, *Judge of the Court of Appeal*
Campbell Lane, *Judge of the Superior Court*
William D. Lighthall, *Eminent Lawyer, Poet, and Philosopher*
Michel E. McMahon, *Coroner of Montreal*
Robert C. Smith, *Eminent and eloquent Lawyer*
James Crankshaw, *Compiler Annotated Criminal Code*
John Fair, *Eminent Notary*
Peter Mackenzie, *Treasurer Province of Quebec*
John E. Martin, *Chief Justice Superior Court*
Charles A. Duclos, *Judge Superior Court*
Alexander B. Falconer, *Eminent Advocate*
Farquhar S. Maclennan, *Judge Superior Court*
R. A. E. Greenshields, *Acting Chief Justice Superior Court*
George F. O'Halloran, *Deputy Minister of Agriculture*

In those days we had no scholarships, no prizes or medals, other than the Elizabeth Torrance Gold Medal, awarded to the graduate attaining the highest marks in the final examinations. We had no permanent staff, we had not so many lectures, nor so thorough a course as the revised enactments of the Bar have since required, but notwithstanding, through sheer study and merit, and in some cases with perhaps a little political influence, it is not over presumptuous to feel that the Law Faculty of fifty years ago produced men who favourably compare with those who preceded and followed them.

Full recognition and appreciation must be given to the great strides which the University has made in this and its other faculties, to the ever increasing spread of its activities under the effective guidance of its eminent Chancellors, Principals, Boards of Governors, and Professorial Staffs, and to the support of its Graduates' Society and kindred bodies.

May it so continue and thrive *ad multos annos.*

Football Dinner

The McGill Society of Toronto announces that, as in previous years, a stag dinner will be held following the McGill–'Varsity football game on October 15th. Tickets for the dinner will be $3, and arrangements will be in charge of E. G. McCracken, Sci. '24, Secretary, McGill Society of Toronto, c/o Sangamo Company, Limited, 183 George Street, Toronto, to whom application for football and dinner tickets should be addressed.

	BASKETBALL	BOXING, WRESTLING, FENCING	ENG. RUGBY	GOLF	GYMNASTICS	HARRIERS	HOCKEY	RUGBY	SOCCER	SWIMMING	WATER POLO	TENNIS	TRACK	ROWING	McGILL	U. OF T.	QUEEN'S	MONTREAL	WESTERN
Year															(Championships)				
1930–31	M	T	M	M	M	T	M	Q	M	M	M	M	M	T	10	3	1		
1931–32	M	Q	M	T	M	M	T	W	T	M	T	Mtl	M	T	6	5	1	1	1
Standing 1898–1932																			
1915-1919 War Years																			
McGill	8	4	5	3	8	3	5	6	6	12	15	12	18	2	107				
U. of T.	8	11	3	6	4	14	16	13	15	7	4	4	11	4	–	120			
Queen's	3	4					5	9	1						–	–	22		
Montreal												1			–	–	–	1	
Western								1							–	–	–	–	1

Thirty-Four Years of Intercollegiate Athletics.

McGill's Football Prospects*

By FRANK SHAUGHNESSY

IN my opinion the McGill football squad for this year is the most promising of the past four years. The fact that a whole new line and half a back line had to be added last year, is, in my opinion, the best thing that could have happened. The team was green, and made many mistakes in the early part of last season, but developed towards the close to such an extent that it was about as strong and smart as any team in Canada. One quality that the team can be especially proud of, was the unquestioned courage they displayed in all games. The fine spirit was magnificent—there was absolute harmony among the players—they trained faithfully and gave their best at all times.

This season Doherty, Talpis, Smythe, Church, McGillivray, and Greenblatt will not be available. These men were useful members of the 1931 team, and Doherty especially will be a severe loss, as there is no question in my mind that in the final games he stood out as the best half-back of the year. The Freshmen squad as a whole showed spirit all season, and were the main factors in developing the Senior team.

McGill this year will need to develop a back, to take Doherty's place, and this will be a real task. The teamwork of Hammond and Doherty was the best that has been seen in intercollegiate football since the days of Leadley and Batstone. The confidence that these two players had in each other enabled them to take chances in passes that other backs did not dare to take. While we have three good half-backs coming up from the Freshmen squad in Riddle, Markham, and Gordan, we cannot expect these boys to team up with Hammond with the same confidence that the experienced Doherty did. Of course, the big requirement is a kicker, and whether Gordan or Clark of the Freshmen will develop into a star punter, no one can tell. They are both promising, and I hope they will come through.

*Adapted from an article first appearing in the *McGill Daily*.

To state what college appears to be the best equipped for 1932, is difficult. One must always bear in mind that Toronto always has had the best material each year. This University, situated in the heart of the best scholastic football in Canada, naturally receives the majority of the best players. However, if McGill is fortunate enough to have back all the players who are eligible, we shall certainly have a team that will be a contender all the way.

The forward pass has, in my opinion, proved to be the success that was expected. The play was abused to a certain extent last season and may have caused teams who used it to lose games, the reason being, of course, that the players had not learned to use it as a strategical weapon, but there is no doubt that it made the game far more pleasant to play and watch. The McGill players enjoyed every minute of their practice the past season, they had a tremendous amount of fun experimenting with the forward pass, and the necessary running was a great factor in getting them into condition.

In regard to whether any further points in the U.S. game might with profit be adopted in Canada, I might state there is one rule that the U.S. adopted many years ago that our game might take up with profit. This rule provides that no players of the attacking team may be in motion toward the opposing goal line at the instant the ball is snapped. This rule was adopted to prevent big line men from coming at full speed towards their opponents before the ball is snapped. There is a terrific shock when a player comes thus into contact with the defensive tackler. It is extremely dangerous play and I am in favour of eliminating every unnecessary danger. Last season the McGill team used none of that type of play—our offence was based on deception instead of power, and the result was none of the bruising contact between the ball-carrier and the tackler that would have resulted if we had imposed the so-called power plays. I adopted this style of play purposely to show that teams could gain without power plays.

The American students attending McGill readily adopt themselves to the Canadian game when patience is exercised in the first two weeks of the training season. Naturally, at first they are all at sea when they find there is no interference permitted in the Canadian game, but after they accustom themselves to our style of play, I have found that they like it much better than the American game. One reason for this is that Canadian players are allowed to act on their own initiative to a far greater extent than the players south of the line.

I doubt if there is any prospect of a game this year between McGill and an American college, although since the adoption of the forward pass we are far better equipped to meet them than heretofore, but on account of Western University being added to the schedule, all college teams in Canada are dated up, while formerly there were always two open dates on the schedule that permitted the playing of outside teams.

In reply to a number of questions regarding players in the league, I think the best kicker in the intercollegiate is Carter of Queen's. I have never seen this man off his game, have frequently seen him kick 65 and 70 yards—and his kicks were always sufficiently high. The best tackler in the intercollegiate, in my opinion is Kennedy of Western. He is down under every kick and tackles harder than any man I saw last year.

The best outside wing last year was Don Young, of McGill. This player can do everything. He was always the first man down the field and was as good a forward-pass receiver as any one could ask for. He also is a very quick thinker, and can be relied upon to do the right thing when the opportunity arises. This year he will captain the McGill team for the second time, an honour given to only one other man in the University's athletic history.

The best line plunger was Valleriott of Western, and the most elusive ball-carrier was Doherty of McGill; he was in a class by himself.

In regard to the Freshmen rule, I think it would be a calamity to have this rule discarded. Since its adoption in the league, it has prevented the interference of misguided alumni in importing tramp athletes into the universities. This alone has done a tremendous amount of good to sport, as the past few years have seen none of the bitterness and suspicion toward the make-up of the teams that was formerly frequent. Also the fact that Freshmen are debarred from senior teams prevents youngsters from acquiring a notion that sport is the most important thing in their college career, and they have been given time to establish themselves along scholastic lines, before being allowed to take too great a part in the athletic activities of the University.

Personally, I like football better than any other game, as I think the contact feature is doing more good than any other game that is being played at the present time. The players learn that team work, and not individual ability, is the thing that counts. The training and sacrifices that are endured during the season go far in developing character, clean living, and self-reliance in after life.

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An Address Before Little Convocation, May 25th, 1932

By DEAN IRA A. MACKAY

PRINCIPAL AND VICE-CHANCELLOR: My first pleasant duty this morning is to congratulate the candidates who have received their certificates and diplomas; my second, and this time speaking for the whole University, to wish them prosperity and happiness in the future; my third, and the least pleasant of all, to offer them a few sentences of admonition and encouragement.

Fellow Students: Do not think that your education is now complete, for you have only received until now the beginnings of half an education. I sometimes think that the old philosophers and thinkers who divided human nature into two halves, a mental half and a moral half, may have many sins to answer for at the judgment day. It is impossible to separate the mental and the moral elements in human life in this way. Every mental process, every sentiment, every image, every thought has its moral consequences and its moral responsibilities. As a man thinketh in his heart, so is he. And on the other hand, every moral act or deed must be done with due care and thoughtfulness. A deed once done or a word once spoken is irrevocable. Fate follows hard upon the heels of freedom. Indeed it is just this extra effort to do things a little better than the ordinary, perchance to do them perfectly, which distinguishes the educated from the uneducated person. Your education until now has been mainly an education of the mind, and you must now begin to put it into practice. We now know, too, that no knowledge is complete until it is put into practice, and I can assure you, from my own experience and from the experience of many others, that, if you do not put your education into practice, it will soon entirely disappear, and the time you have spent in this University will, therefore, be in vain.

At this season of the year, college and university commencements and convocations are being held in almost every land, and I do not think that university students have ever before ventured out into so perplexing and dangerous a world as the one into which you are now venturing. The civilization in which we are now living seems to have saddled itself on the horns of a huge dilemma. During the first millennium of our calendar, men devoted their lives mainly to the claims of religion, morals, and art, and during the second millennium to the claims of science, industry, and commerce. Now all these forces or interests are necessary elements in the composition of that strange mixture of worldliness and unworldliness which we call human life. Take away any one of them and the whole fabric of human society falls to the ground. On the other hand, if we over-strain or emphasize any one or more of them at the expense of the rest, injustice, oppression, and perhaps revolution and war are already at the gate and will come in. The great problem, therefore, which we have to face now, is how we can set these forces and interests in their proper place and rate them at their proper value in human society. May I illustrate my meaning by an example and a question. Perhaps the greatest period of French art, literature, and manners was the Louis period, and all the while the people of France were perishing in ignorance and destitution. Followed, the French Revolution and all its horrors. Are we then over-straining the claims of mechanical science and finance in a similar manner at the present time, and, if so, what may we expect in the future?

I should like to discuss some of these questions with you this morning, but they are too vast and too perplexing to discuss seriously in so short a time. May I, therefore, offer you instead a few simple maxims which may help you to solve some of them for yourselves in your own lives? These maxims may appear very commonplace and ordinary, but they are worth remembering. I shall set them down one by one.

First, always take the very best care of your bodily health through all the years of your life. A healthy body, a healthy brain and alert bodily sense need have no fears. We do not know how this bodily organism first became sensitive and, becoming sensitive, became aware of a world of nature around it, but we do know that it is a fact. This is not my first convocation: it is my fortieth; and when I look back over the succession of students I have known—and it has always been my privilege to associate with the very best University students wherever I have gone—I am greatly disturbed by the number of

them who have fallen by the way as a result of injured or impaired health. There have been some serious mental fatalities among them.

I should like to see all the students of McGill play more games than they do. I know that we are told that football and hockey have become far too competitive and commercial, and this is true. On the other hand, I cannot easily overlook the fact that football is the best combination autumn game and hockey the best combination winter game that has ever been invented; and, if these games have become too competitive and too commercial, it is not the fault of the games, or of the college spirit in which they are played, but of other influences which we would gladly eliminate from our University work and University councils, if we could.

Second, make a practice wherever you go of observing the interesting and beautiful things in Nature around you. This is, I think, the greatest single source of human enjoyment. The fields and the flowers and the cleansing rains and the pure white whirling snow-drifts contain infinite sources of happiness for all who wish to enjoy them. We all of us really owe more to nature around us than we owe to our earthly parents. Why then should the love of nature be left out of our lives? Sometimes I think that I should like to have a course of lectures in the University on the interesting and beautiful things in nature. Perhaps you think that that is a foolish suggestion, but will you tell me how we are to know anything about literature unless we also know what literature is about?

More than half of the people of Canada live in cities, and I cannot help feeling that this is unnatural, especially in a new, clean-washed, sunny country like our own. I wonder if all these machines, mechanical factories, and great ugly cities really add anything to the maintenance and happiness of life? Perhaps the answer is that some of them do and some of them do not. But how does the balance stand? Suppose that all the commodities of real human value produced by machines and factories were set down on the credit side of a long inventory and all the cost of producing these machines and factories were set down on the debit side, would there really be any balance left on the credit side? Or to state the problem in another form; suppose that all the wealth expended in producing these factories and cities had been spent on improving and beautifying the villages and country homes, would not Canada be a much greater and happier country than it is to-day? These be hard questions, but the human heart will answer them some day.

Third, always make a practice of reading good books. Read Spenser, Milton, Addison, Berkeley, Wordsworth, Ruskin, Matthew Arnold, Robert Louis Stevenson, and all the rest. There is nothing in all the world so elevating to the human mind as the reading of good books. It is like sitting beside the greatest spirits that have ever lived and listening to their discourse in silence and alone, and could anything add more to the joy of life than that?

And I shall also add—and this I say after long and patient thinking—avoid a certain class of modern books and plays, which you all know well and which are an offense alike against good morals and good taste. I know that the dark and sinful side of life appears in nearly all great literature, both secular and sacred, but it appears in its proper perspective, and nemesis and tragedy are never far away; but in these books and plays I refer to, this side of life appears as the quite inevitable and proper thing. As you respect yourself and honour your Alma Mater, pass them by.

Fourth, avoid all false idealisms. Do not make the best the enemy of the better. Do the good you can do; do not try to do the good you cannot do. It is wrong to try to do the good you cannot do. The ideal is not at the end of life. The ideal is a way of life. We live in a time-world and time is always a succession of hours and days and years, world without end. Time never jumps over to-morrow. It is in vain, therefore, that we dream of the day after to-morrow unless we also see to-morrow's duty clearly. Here or nowhere is thy ideal. Do the duty which lies nearest thee, and thy next duty will then become clearer. A French author has stated this maxim very clearly when he says: "We can never realize the ideal unless we can first idealize the real around us."

Fifth, do not forget the rule of kindness. There is a law which is higher than the law of justice; it is the law of kindness. The man who is always crying out for justice is a poor, pathetic soul. Justice gives to each man his due and no more. It never produces anything, it never creates anything. Suppose that you do get justice; suppose that you receive no more than you give and give no more than you receive, then, indeed, you will balance your budget in the end, but the balance will be zero and your life in vain.

Sixth, do not neglect the offices of religion. I should like to tell you about some recent advances in philosophy, for I see new light in that direction. We now know by scientific proof, for example, that physical matter is not

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the dead inert inhuman thing which the physicists of the last century believed it to be. We know, too, that space and time are not the infinite, empty nothingnesses which we sometimes naively suppose them to be. Matter without energy and motion is helpless, and blind energy wholly unguided by reason never could have designed this wondrous world, putting each proton and planet in its place. Mathematical physicists, terrestrial and celestial, are every day discovering new immaterial presences in every point of space and in every particle of matter. The physical universe has, in other words, walked right up to the door of mind, and we are now beginning to ask the old question once more? How is it possible for us to know anything at all? How is it possible for the physical universe to search out the secrets of my mind and reveal itself to me? Clearly the physical universe cannot be as alien and impersonal as it seems. The physical scientists tell us—or perhaps I should say a few of them tell us—that man is only a speck in the infinite universe, but that is foolish, for how could an infinite universe reveal itself to a speck of itself. Magnify, therefore, the physical universe as much as you will, you are only paying an implicit compliment to the little mind which can say "Oh Universe!" There never was a time when the spiritual principal in nature and in human life was as obvious as it is at present. That is why I say that I see new light ahead and why I believe that you may venture forth from this University with greater hope and courage than any generation of students who have preceded you. Finally, do not forget your Alma Mater. You will find your college memories one of the greatest pleasures in after years. Do not forget Old McGill:

The gentle lady beside the way,
Who sits so peacefully day by day,
Like a fairy queen in her castle gray,
'Neath the mountain's brow.

Her simple robes are of sombre hue,
But her head is clear and her heart is true,
And her eye, as bright as the pearly dew,
On a summer's morn.

So remember her well wherever you go,
Through the summer's suns and the winter's snow,
For she will remember you, you know,
While the seasons last.

The Imperial Conference, 1932

(*Continued from Page 9*)

Article 18—Deals with a modification by Canada of existing regulations governing the importation from the United Kingdom of pedigree stock.

Article 19—Deals with the preferences to be accorded by Canada to non-Self-Governing Colonies, Protectorates, and Mandated Territories in return for the preferences mentioned in Article 8. Schedule F, in which these preferences will appear, has not yet been made public.

Article 20—Provides that nothing in the present agreement shall prejudice any section of the Canada–West Indies Trade Treaty of July 6, 1925.

Article 21—Expresses the agreement of the United Kingdom and Canadian Governments to prevent frustration by any foreign nation of the value of the present treaty through unfair competition.

Article 22—The Treaty to come into effect August 20, 1932—subject to the necessary legislative action being taken as soon as possible—to remain in force for 5 years; and thereafter until a date six months after denunciation by either party.

Article 23—Arranges for consultation in the event that variation of the terms of the treaty is found necessary.

Canada—Irish Free State

The agreement entered into between His Majesty's Government in Canada and His Majesty's Government in the Irish Free State runs for a period of 5 years, subject to denunciation by either party upon 6 months' notice. The agreement secures for all goods produced or manufactured in Canada the benefit of the lowest rates of duty accorded by the Irish Free State. In return, goods the produce of the Irish Free State will be accorded the same preferences as similar goods imported into Canada from the United Kingdom of Great Britain and Northern Ireland.

Canada—Southern Rhodesia

The agreement entered into between His Majesty's Government in Canada and His Majesty's Government in the Colony of Southern Rhodesia runs for 5 years, subject to denunciation by either party on 6 months' notice. Under the

(*Continued on Page 46*)



LORD RUTHERFORD

From the portrait painted this year by Oswald Burley and presented to the Royal Society, London, England.

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Artificial Transmutation of the Elements

By LORD RUTHERFORD, O.M., F.R.S.

Foreword

I GLADLY accede to the request of the Editor of *The McGill News* to give a brief statement of recent work in Cambridge on the transmutation of the elements for two reasons, one personal and the other historical. With regard to the first, I have always retained a lively interest in the progress of McGill University since my happy days there long ago, and this interest has been maintained by the migration of many research students from McGill to work with me in Manchester and in Cambridge. Now that nearly thirty years have passed since the first direct evidence was obtained of the transmutation of matter, I think we can view with some perspective the gradual development of our ideas on this subject. I would like to take this opportunity to emphasise that the credit of the first definite proof of atomic transformation belongs to McGill University. It was in the Macdonald Physics Building in the years 1902–1904 that Soddy and I accumulated the experimental evidence that the radioactive elements were undergoing spontaneous transformations. The disintegration theory, advanced in explanation of the observations, has stood the test of time and has formed the basis of all subsequent developments.

The next stage in advance was a proof that certain elements could be artificially transmuted by bombardment with the *a*-rays from radium, and it should be noted that it was in McGill, in 1903, that the true nature of this radiation, which played such a great part in the development of physics, was first disclosed. There is a saying that "it is the first step that counts," and it is clear that to McGill belongs whatever credit is due for the early ideas and experiments which opened up the way into the unknown that all subsequent investigators have followed.

In this article I have tried to give a brief and I hope understandable account of the gradual growth of our knowledge of the transmutation of matter—one of the most interesting and fundamental scientific problems in the world to-day.

History of Transmutation

The possibility of the transmutation of matter has always exerted a strong fascination on the scientific mind and much influenced the early stages of the development of science. We now know that the physical and chemical methods employed in the early attempts to produce transmutation were quite ineffective for such a purpose. A definite attack on this problem has had to await a clearer understanding of the structure of the atom and the development of methods for detecting individual atoms of matter in swift movement. The proof that the heavy radioactive elements were undergoing spontaneous transformations was a great step in advance and revived the dormant interest in the problem of transmutation. The study of these transformations gave us for the first time some idea of the powerful forces that must exist within the structure of atoms.

The atoms of the radioactive elements break up with explosive violence with the expulsion in most cases of a swift *a*-particle (helium nucleus), or in others with the ejection of a swift electron (*b*-particle). As the result of this explosion the resulting atom has entirely different physical and chemical properties. It may in turn break up and a whole series of successive transformations may occur. In this way more than thirty new transition elements of limited life have been brought to light. The processes occurring in the radioactive atoms appear quite uncontrollable by any physical or chemical agencies at our command. We can watch the explosions of these atoms, but are powerless to influence them.

The *a*-particles emitted from radioactive bodies are the most energetic projectiles

known to science. They move so swiftly and have so much energy of motion that they can penetrate freely through the outer structure of the atoms, but suffer marked deflexion from their path if they approach closely to the minute charged nucleus which is a characteristic feature in the structure of all atoms. Indeed, it was from observations of the number and magnitude of these deflexions that the conception of the nuclear constitution of atoms first arose. These deflexions allow us to form some idea of the dimensions of the nucleus itself, at any rate in the case of the lighter atoms. It has been found that the radius of the nucleus, assumed spherical, must in general be very small, lying between 10^{-12} and 10^{-13} cm., so that the volume of the nucleus is minute compared with that of the atom itself as ordinarily understood.

It is important to emphasise a clear cut distinction between the nucleus and the planetary electrons which surround it at a distance. By the action of light, X-rays, or by collisions with swift *a*– or *b*–particles, one or more of these outer electrons may be readily removed and indeed it is possible in some cases to strip the lighter atoms of all their outer electrons. By this loss of electrons, the ordinary physical and chemical properties of the atom are profoundly modified for the time, but yet at the earliest opportunity the nucleus captures new electrons from its surroundings and these take the place of the lost electrons. The atom thus regains its original state and no permanent change in the atom has been effected. If we wish to effect a veritable transmutation of the atom it is necessary to alter the charge on the nucleus or, what is equivalent, to remove one of the charged units which make up the structure of the nucleus itself.

It is believed that the two primary units comprising the nucleus are electrons and protons, but there is strong evidence that secondary more complex units may be formed by the combination of protons and electrons. The most important secondary unit is the *a*–particle, consisting of a combination of 4 protons and 2 electrons, and recently evidence of the existence of a neutron—a close combination of a proton with an electron—has been obtained. Both of these secondary units may form an essential part of the nuclear structure.

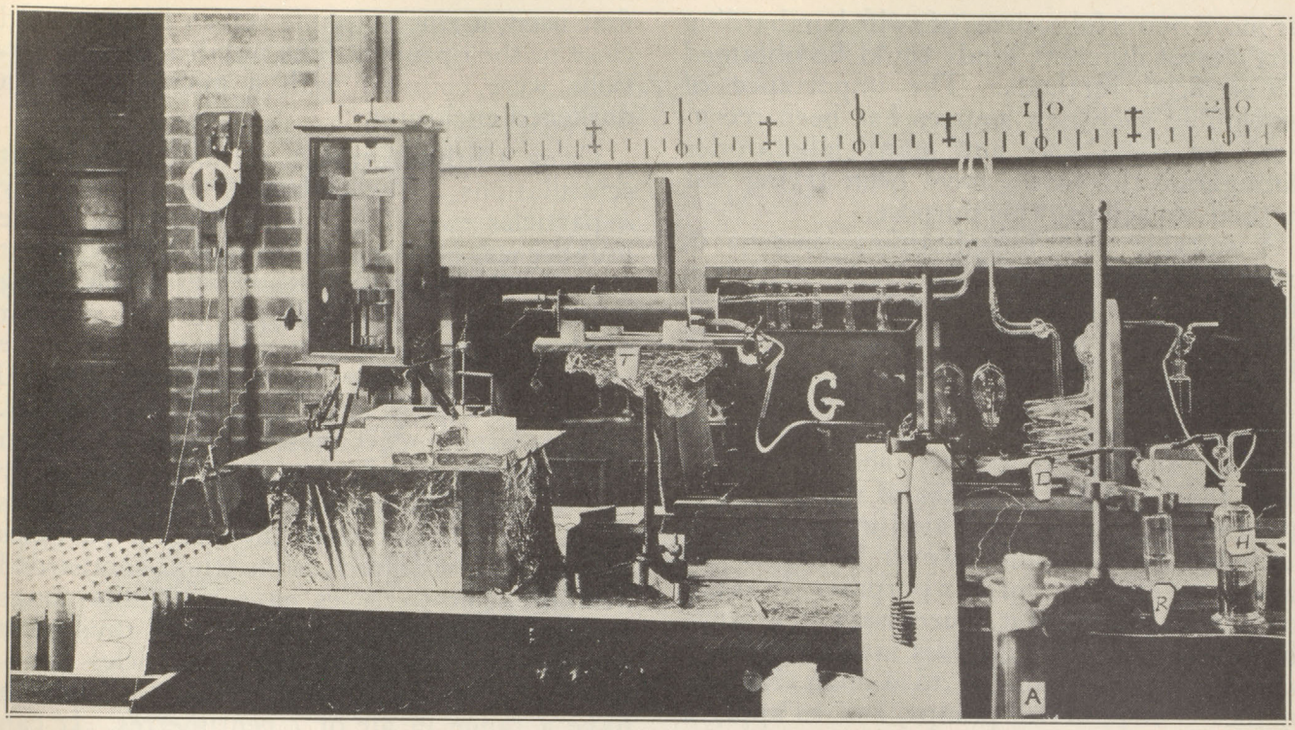
Artificial Transmutation

While the nucleus of an atom is a minute and strongly guarded structure, yet it seemed likely that a very swift proton or *a*–particle might be able to penetrate the nucleus of the lighter atoms and to alter its charge and mass. Following out these ideas Rutherford, in 1919, bombarded nitrogen gas with swift *a*–particles from radioactive substances and found that high speed hydrogen nuclei, or free protons as we now term them, were liberated. For nearly 100,000 *a*–particles which pass through the gas on an average only one swift proton was liberated. It was shown that these swift protons could only arise as a result of a close collision between the *a*–particle and the nitrogen nucleus. This was the first time that definite evidence had been obtained that an atom could be transmuted by artificial methods. In subsequent experiments by Dr. Chadwick and the writer, it was found that a number of the lighter atoms could be transmuted by *a*–particle bombardment. In all cases a proton was liberated with characteristic maximum speed and in the case of aluminium the energy of the ejected proton was greater than the energy of the bombarding *a*–particle. Certain light elements like carbon and oxygen appeared to be unaffected by *a*–particles.

The mechanism of this method of artificial transformation of atomic nuclei was brought out clearly by Blackett, who obtained direct evidence that in the case of nitrogen the colliding *a*–particle was captured by the nucleus, the disturbance resulting in the ejection of a proton. Since the *a*–particle has a mass 4 and charge 2, the nitrogen nucleus, of mass 14 and charge 7, is transformed by the capture of an *a*–particle and loss of a proton into a new element of mass 17 and charge 8, in other words into an isotope of oxygen. Subsequently a stable isotope of oxygen of mass 17 has been found to exist in ordinary oxygen. General evidence indicates that the transformation effected by *a*–particles in other light elements is similar in character. It is thus clear that the effect of *a*–particle bombardment leads to the building up of a heavier nucleus with an increase of 1 in the nuclear charge and an increase of 3 in the mass.

Neutrons

During the last few months the experiments of M. and Mme. Joliot and Dr. Chadwick have disclosed a new kind of transformation, brought about by the bombardment with *a*–particles, which occurs in the light elements



THE CONDENSATION OF THE RADIUM EMANATION

In the spiral tube shown above, on November 6, 1902, in the Macdonald Physics Building, McGill University, the radium radiation now known as radon was first condensed by Lord Rutherford, thus proving it to be a gas.

beryllium and boron. It has been found that when beryllium is bombarded with swift *a*–particles no protons are emitted but instead a stream of swift uncharged particles of mass about 1, "neutrons" as they have been termed. The neutron has very interesting properties for it passes freely through the atoms of matter in its path and only shows its presence when it collides directly with an atomic nucleus. In such a case the struck nucleus recoils and is detected by the dense ionisation it produces in its path before being brought to rest. There is evidence that the neutron, unlike the *a*–particle, proton or electron, produces very little ionisation in its passage through a gas, so that its presence can only be detected on the rare occasions when it strikes the nucleus of another atom. It is probable that the nucleus of beryllium of mass 9 and charge 4, captures the colliding *a*–particle and ejects a neutron with high speed. The atom of beryllium is thus transformed into an atom of carbon of mass 12 and charge 6. Feather has shown that the swift neutron also produces a novel type of transformation in nitrogen. In many cases an *a*–particle, instead of a proton, is ejected from the nitrogen nucleus. It will be of much interest to test whether the neutron is able to produce a transformation in other light elements besides nitrogen.

Recent Experiments

Since the nuclei of the atoms are very minute, it is only on rare occasions that the *a*–particle approaches closely enough to a nucleus to effect its transformation. For example, for every million *a*–particles fired into aluminium on an average, only one is effective in causing the ejection of a proton from the aluminium nucleus. Even with the strongest sources of *a*–particles available in the Laboratory, the effects observed are on a very small scale and detailed investigation has only been rendered possible by the development of powerful electric methods for registering the entrance of each individual proton into the detecting chamber. Progress in this problem would be much facilitated if

far more powerful sources of swift bombarding particles of different kinds could be obtained by artificial methods. The importance of developing such new sources has been recognised for some time and many laboratories throughout the world have been trying out methods to achieve this purpose.

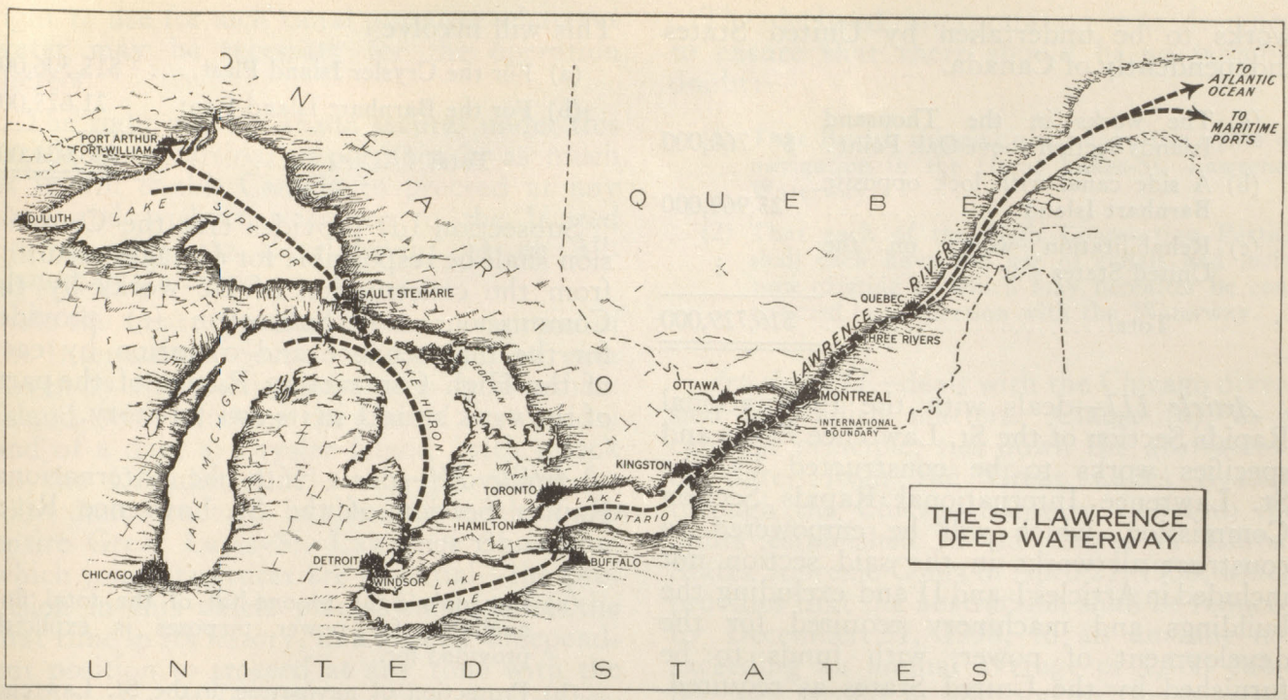
A suitable way for obtaining protons in great numbers is to pass an electric discharge through gas at a low pressure. For example, the passage of a current of 1 milliampere through the tube corresponds to the bombardment of the cathode by about 6×10^{15} protons per second. To obtain an equal number of *a*–particles, we should require more than 100,000 grammes of radium. The speed of the protons generated in an ordinary discharge tube would however be much too slow to be effective for our purpose. In order to increase the speed it is necessary to arrange that the protons should pass into a chamber, which is kept exhausted to a high vacuum by means of powerful pumps, and to apply a high potential to the ends of the chamber. The protons are thus accelerated in their passage through the intense electric field and for a potential difference of about 1 million volts acquire a speed comparable with that of the *a*–particles spontaneously emitted from radioactive substances.

During the past four years, Dr. J. D. Cockcroft and Dr. E. T. S. Walton have been preparing an installation in the Cavendish Laboratory to try out this method. Starting with a transformer which gives 200,000 volts, they have by special devices been able to obtain a steady D.C. potential of about 700,000 volts. This is applied to a large vacuum tube in which the protons are accelerated. Experiments were first made to determine the velocity and power of penetration of the swift protons produced in this way. It was found that, using 600,000 volts, the protons were stopped after their passage through about 1 cm. of air. Experiments were next made to test whether any swift particles were liberated from elements by this proton bombardment. The material to be bombarded in the form of a disc was placed at an angle of about 45° with the direction of the proton stream and the particles to be examined passed outside the tube through a small opening which was covered with a thickness of mica sufficient to stop any primary protons which fell upon it. For the detection of swift particles, the convenient and well known scintillation method was first used, a zinc sulphide screen being placed close to the opening. The number of scintillations were counted with a microscope in a darkened enclosure.

Using a lithium target, a number of bright scintillations like those produced by *a*–particles were at once observed. The number was proportional to the proton current and increased rapidly as the accelerating voltage was raised. Using a proton current of about a micro-ampere, a few particles were observed for as low a potential as 100,000 volts and a large number at 600,000 volts. In later experiments these particles have been examined by electrical methods as well as by the scintillation method, and there appears to be little doubt that they are *a*–particles which are liberated from the bombarded lithium. The particles have a definite range in air of about 8 centimetres and thus have greater swiftness than the *a*–particles spontaneously liberated from radium C, which have a range in air of 7 centimetres. It can be deduced that the energy of the *a*–particle from lithium is about 8,400,000 electron volts while the energy of the bombarding particles may be as low as 100,000 electron volts, but it must be borne in mind that many millions of protons are required before one is effective in promoting the disintegration of the lithium atom.

From these observations, it seems likely that a proton is occasionally captured by the lithium nucleus of mass 7, and charge 3, giving rise to an unstable element of mass 8, and charge 4, which immediately breaks up into two helium nuclei each of mass 4. If momentum is to be conserved, it is to be expected that the two helium nuclei should fly off in opposite directions. The correctness of this view admits of a simple experimental test which no doubt will be made in the near future. It is natural to suppose that the lithium nucleus of mass 7, normally consists of 1 helium nucleus, 3 protons and 2 electrons. The capture of the bombarding proton by the lithium nucleus in some way results in the combination of the 4 protons and 2 electrons to form a new helium nucleus or *a*–particle. It may be that the *a*–particles, which are believed to be the main constituents of the heavier nuclei, are always formed in situ within the nucleus itself. On the view outlined, the energy emitted during the transmutation of lithium is consistent with the

(Continued on Page 46)



The St. Lawrence Deep Waterway Treaty

IN VIEW OF THE INTEREST AROUSED THROUGHOUT CANADA BY THE SIGNING IN JULY OF THE ST. LAWRENCE DEEP WATERWAY TREATY, *The McGill News* TAKES PLEASURE IN PRESENTING THE FOLLOWING COMMENT ON THE TREATY'S ARTICLES AND SIGNIFICANCE

Preamble: The treaty's preamble enunciates basic considerations which governed the High Contracting Parties in determining upon the negotiation of the St. Lawrence Deep Waterway Treaty, and as essential items embodies—

> A declaration by the Government of Canada of its intention to complete the New Welland Ship Canal and canals in the Canadian Section of the St. Lawrence River in the Province of Quebec; and a declaration by the Government of the United States of its intention to complete the works in the Great Lakes System above Lake Erie; at a date in both instances not later than the date of the completion of the Deep Waterway in the International Section of the St. Lawrence River.

Article I—deals with the International Section of the St. Lawrence River and specifies works, in accordance with the final report of the Joint Board of Engineers, to be undertaken by Canada independently of the United States.

(a) The works in the Thousand Islands Section below Oak Point .	$ 772,000
(b) A side canal with lock opposite Crysler Island.....	8,219,000
(c) Rehabilitation works on the Canadian side.....	8,403,000
Total.....	$17,394,000

As the works provided for under (b) and (c) above are located wholly on the mainland on the Canadian side of the river, it was considered desirable that their construction should be wholly a Canadian responsibility.

Article II—deals with the International Section of the St. Lawrence River and specifies

works to be undertaken by United States independently of Canada.

(a) The works in the Thousand Islands Section above Oak Point.	$ 760,000
(b) A side canal with lock opposite Barnhart Island.....	25,969,000
(c) Rehabilitation works on the United States side.....	?
Total.....	$26,729,000

Article III—deals with the International Rapids Section of the St. Lawrence River and specifies works to be constructed by the St. Lawrence International Rapids Section Commission, which will be empowered to construct all works in the said section not included in Articles I and II and excluding the buildings and machinery required for the development of power, with funds to be furnished by the United States as required. These works consist of the following:

Upper Pool	
(a) Common Works.....	$64,516,000
(b) Substructures power house, Crysler Island.....	24,893,000
Lower Pool	
(c) Common Works.....	29,485,000
(d) Substructures power house, Barnhart Island.....	33,698,000
Total.....	$152,592,000

Subsection (a) provides that the Commission is to be given the powers necessary to carry out the work required; and Subsection (b) provides that, so far as possible, the works situate on the Canadian side (or an equivalent proportion of the total) shall be executed by Canadian engineers, Canadian labour, and with Canadian material. This will involve an expenditure in Canada of $54,718,000. A similar provision in favour of the United States governs the works situate on the United States side of the boundary.

Subsection (c) provides that each party may arrange for the construction in its own territory of the power-house superstructures and power machinery at the Crysler Island and Barnhart Island power sites, respectively.

So far as the Dominion is concerned the financing of this portion of the Canadian power undertakings will be undertaken independently by the Province of Ontario at such time as the power demand requires. This will involve

(a) For the Crysler Island Plant....	$15,306,000
(b) For the Barnhart Island Plant..	21,625,000
Total.....	$36,931,000

Subsection (d) provides that the Commission shall be responsible for damages resulting from the construction of the works by the Commission; and Subsection (e) provides for the maintenance and operation by each of the High Contracting Parties of the parts of the work situate in its own territory.

Article IV—deals with the International Rapids Section of the St. Lawrence River and under it:—

(a) Canada's right to one-half of the total flow available for power purposes is explicitly provided for.

(b) Protection of navigation in the St. Lawrence River in Montreal Harbour and in the channel below is made the cardinal feature which must govern the regulation of flow out of Lake Ontario and through the International Section of the St. Lawrence River during and after the construction of the power-navigation works.

Article V—provides that each of the High Contracting Parties shall maintain complete ownership of and complete legislative, administrative, or other jurisdiction over all works lying on its own side of the international boundary irrespective of by what agency the said works are constructed. It is declared that the works constructed shall constitute a part of the territory of the country in which they are situated.

In view of the fact that the treaty provides for certain of the work in the river section being carried out by an International Commission from funds supplied by the United States, this proviso is inserted to ensure that there is no question as to there being complete Canadian sovereignty maintained over all structures lying on the Canadian side of the international boundary.

Article VI—provides that either of the High Contracting Parties may at any time construct, wholly within its own territory, alternative canal and channel facilities for navigation along the entire Great Lakes and connecting waters and including the St. Lawrence River to the point where it enters the Province of Quebec, together with the

right to use for such canal purposes whatever water may be necessary for the operation thereof.

The right which Canada secures under this article is of cardinal importance in as much as it will enable Canada to proceed at any time and without reference to the United States, with the development of an All-Canadian waterway.

As the treaty provides for the navigation of the International Section of the St. Lawrence River by the erection of a dam at Barnhart Island (with a lock on the United States side) and of a dam at Crysler Island (with a lock on the Canadian side)—thus providing for joint dam structures in the only reach of the entire Great Lakes–St. Lawrence System in which joint structures are essential—the provision in this article places Canada, for the first time in its history, in a strictly independent position to proceed at any time with the construction of an All-Canadian deep waterway throughout the entire Great Lakes-St. Lawrence River System from Port Arthur and Fort William to the sea.

Article VII—The objective of Article VII is to maintain the rights of navigation accorded to each of the High Contracting Parties under the treaties already in effect between His Majesty and the United States, and to ensure by a declared interpretation of these treaties, that all subjects or citizens of each of the High Contracting Parties and their ships, vessels, and boats shall have rights of navigation in the St. Lawrence River and the Great Lakes System, including the canals now existing or which hereafter may be constructed.

The declared interpretation was designed to ensure that there should be no possible doubt:—

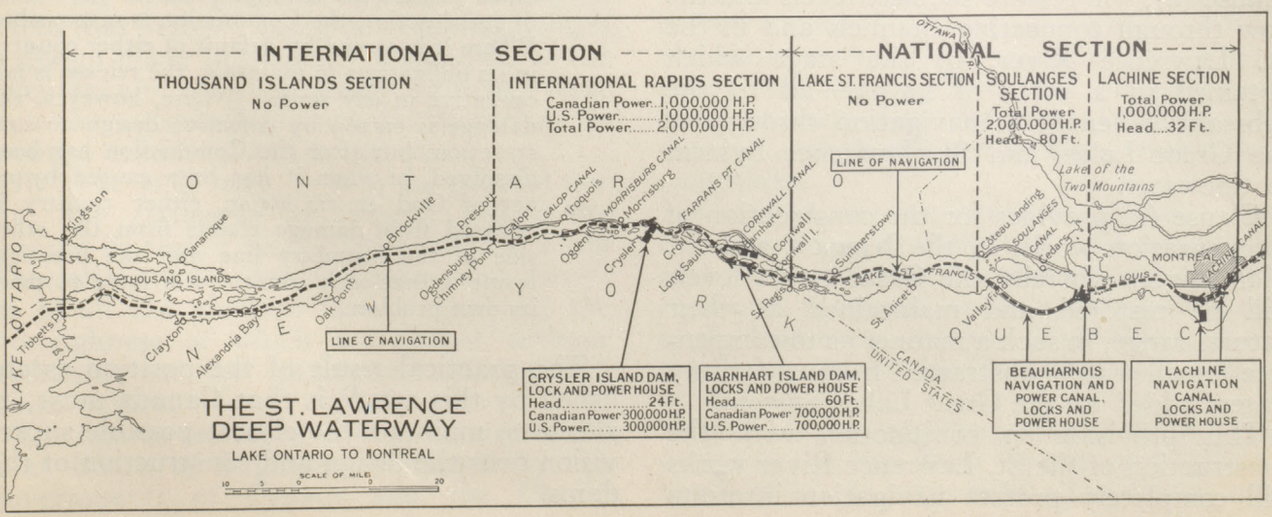
(1) That British shipping shall have the rights of navigation in the Great Lakes-St. Lawrence Waterway.

(2) That each of the High Contracting Parties shall each have the use of canals and locks now existing or which may hereafter be constructed in connection with the Waterway.

Article VIII—deals with the Chicago diversion and allied matters. Clause (a), as a cardinal principle, ties down the abstraction of water from the Great Lakes System through the Chicago Sanitary Canal to the limits established in the decree of United States Supreme Court of April 21, 1930, which provides that the abstraction shall be reduced by December 31, 1938, to an amount not exceeding an annual average of 1,500 cubic feet per second in addition to the domestic pumpage of the City of Chicago.

The above limit can only be increased as an emergency measure approved as such by the United States Supreme Court, and the United States Government, and concurred in by Canada. Failing such concurrence by Canada, the emergency proposal must be referred to an international arbitral tribunal which, if it permits the emergency diversion, is empowered to stipulate compensatory provisions. Ultimately the abstraction must return to the amount provided for in the United States Supreme Court Decree.

Clause (b) sets up a basic provision that hereafter—other than the specific diversion permitted at Chicago—no abstraction from the Great Lakes System to another watershed



shall be made except by authorization of the International Joint Commission.

Clause (c) provides that there shall be kept a definite official record of all waters abstracted from the Great Lakes System (having in mind the Chicago Abstraction) and all waters added to the Great Lakes System (having in mind the Ogoki diversion), in order that both governments may be officially and mutually advised with respect thereto at all times.

Clause (d) provides that Canada and the United States shall each retain exclusive rights to the use of any waters diverted *into* the Great Lakes System from watersheds lying wholly within the borders of either country.

This proviso ensures that the 4,000 cubic feet per second which can be economically diverted from the Ogoki watershed into Lake Nipigon and thence into the Great Lakes will be available, without further treaty negotiation, for power on the Nipigon, St. Mary, Niagara, and St. Lawrence Rivers.

Briefly, this means that Canada will be in a position to develop 277,100 horse power on international waters without further negotiation with the United States. Furthermore, Canada will be able to develop 170,000 horse power on the Nipigon River and 73,300 horse power on the National Section of the St. Lawrence River lying within the Province of Quebec. The total block of power involved in the Ogoki diversion is 520,000 *all Canadian* horse power.

A further point of importance lies in the fact that this diversion into the Great Lakes System will practically balance the abstraction which is permitted through the Chicago canal under Clause (a) and, taken in conjunction with the limitation provisions of Clause (a), will restore the lake levels and the flow through connecting channels and in the St. Lawrence River, to the stage which obtained in a state of nature—all to the substantial benefit of navigation throughout the Great Lakes and St. Lawrence System to tidewater.

Clause (e) provides for the construction of compensation works in the Niagara and St. Clair Rivers whereby the Great Lakes levels will be restored and maintained at their natural range, in such a manner as to compensate for all waters abstracted from or for any waters added to, the Great Lakes System.

This provision in conjunction with the construction of the St. Lawrence River works will completely protect navigation interests all down the Great Lakes System to Montreal. From Montreal to tidewater the levels will be restored to their natural regimen by the limitation of diversion through the Chicago canal as provided for in Clause (a) and by the diversion of the Ogoki waters into the Great Lakes System as provided for in Clause (d).

Article IX has to do with damage claims resultant from any action authorized or provided for by the treaty and the acquirement of lands necessary to give effect to the provisions of the treaty.

Sub-section (a) insures that each of the High Contracting Parties is protected from claims in respect to damage arising in the territory of the other as a result of any action authorized or provided for by the treaty. The situation with regard to damage claims is accordingly:—

(1) Construction damage in work undertaken by the Commission—responsibility is placed upon the Commission.

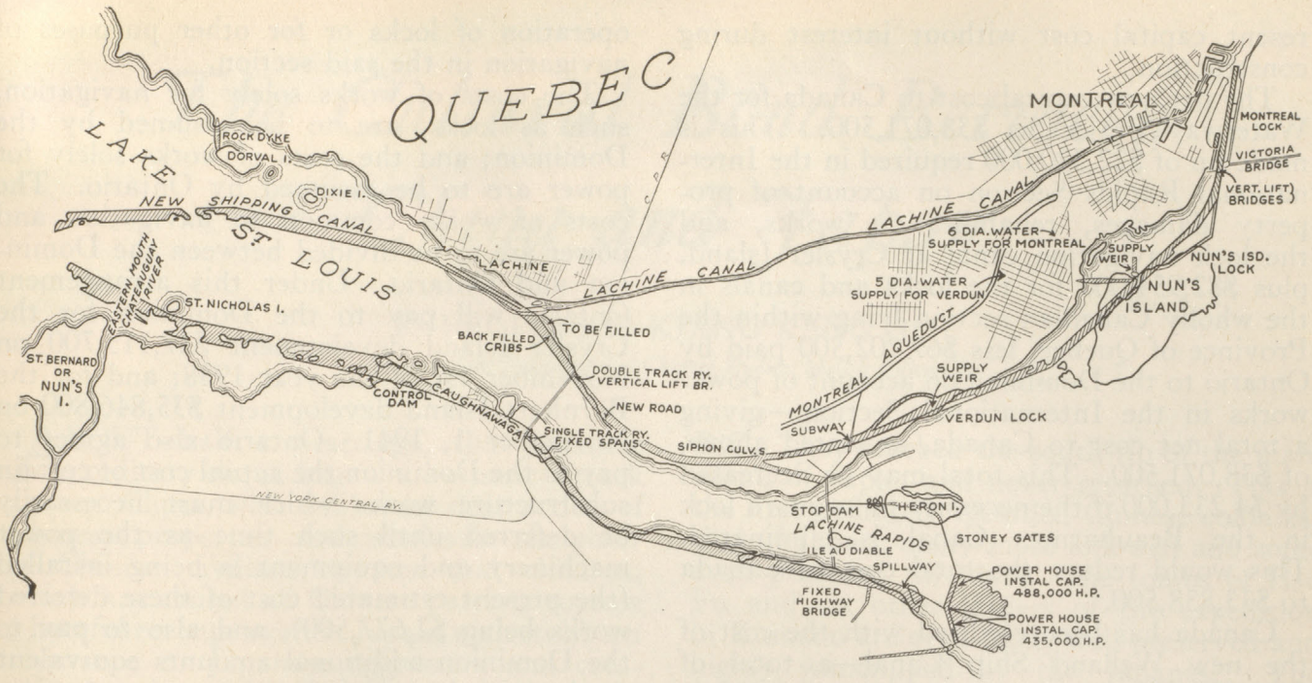
(2) Construction damage in work undertaken by either Canada or the United States—liability governed by the existing law. Where, however, damage is caused by the authorized construction as distinct from negligence in the course of construction, each country is released from liability for damage caused on the other side of the boundary line.

(3) Damage resulting from authorized works such as the Ogoki and Chicago diversions, the putting in or taking out of compensation works, the effect on levels of the dams and of the regulation programmes—each country is released from any claims for damages occasioned in the other country. Permanent effects on levels must, of course, be covered by the acquisition of flowage easements but otherwise this release is operative.

(4) Damage resulting from the breaking of the dams—where the damage arises in the course of construction, the Commission is responsible. Where it is caused by default of either country in its obligations to maintain, the release is not operative in any sense. Where, however, the damage is caused by defective design or construction, but after the Commission has been dissolved, or when it has been caused by an act of God or *vis major*, either country is released from damage claims from the other side of the boundary line and the practical result is that each country will have to meet its own problem.

The practical result of the position established by this article is that Canada must, at all costs, maintain the closest possible supervision over the design and construction of the dams.

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By courtesy of the *Montreal Star*

HOW THE PROPOSED ST. LAWRENCE DEEP WATERWAY WOULD AFFECT MONTREAL

Sub-section (b) requires each of the High Contracting Parties to acquire, on its own side of the boundary, all allowances that are necessary to give effect to the provisions of the treaty, including the necessary flowage easements.

Estimates of Cost

In various quarters, questions have been raised as to the dependability of the estimates upon which the St. Lawrence Deep Waterway Project has been based. The differences between the estimated cost and the actual cost of other public undertakings have been quoted to support the contention that estimated costs are, as a rule, too low. Without reviewing other projects, in detail, it may be stated that in many cases, far-reaching charges in design made subsequent to the date of the acceptance of the preliminary estimates have been the outstanding cause for discrepancies between estimated and actual costs.

Be that as it may, it is to be pointed out that the estimates at present before the country in regard to the St. Lawrence Deep Waterway are the result of exhaustive analyses of all the physical factors involved, the thoroughness of which are almost without precedence in the history of undertakings of like nature.

The figures are based upon estimates of the Joint Board of Engineers appointed by the Governments of Canada and the United States to investigate and report on the waterway project. In the International Rapids Section these estimates have been further supported by what has been termed the Conference of Dominion and Ontario Engineers, whose report was submitted to the Dominion Government in 1929.

The estimates are based on unit prices taken as current in 1926 which were determined from actual contracts under way at that time on works of similar character such as the Welland Ship Canal, the Muscle–Shoals Power Project on the Tennessee River, the various developments on the Gatineau River, the Great Falls Development on the Winnipeg River, LaGabelle Development on the St. Maurice and many others. On completion of the estimates of cost as determined from the above data, 12½% was added for Engineering and contingencies and an additional 10% was added to the cost of all dams in order to cover contingencies due to foundation conditions.

The estimates are, therefore, founded upon exhaustive field investigations and dependable cost data, and may be said to represent the combined judgment of outstanding engineers of the Dominion and the United States on the one hand and of the Dominion and Ontario on the other.

All costs presented herewith are based upon estimates of the Joint Board of Engineers made as of the year 1926. The figures rep-

resent capital cost without interest during construction.

The net new capital cost to Canada for the Waterway Project is $38,071,500. This is made up of $22,320,000 required in the International Rapids Section on account of property damages, rehabilitation works, and the lock navigation canal at Crysler Island, plus $82,954,000 for the locks and canals in the wholly Canadian section lying within the Province of Quebec, less $67,202,500 paid by Ontario to the Dominion on account of power works in the International Section,—giving a total net cost to Canada, as stated above, of $38,071,500. This total may be decreased by $4,233,000 if the necessity for a guard lock in the Beauharnois Canal is eliminated. This would reduce the total cost to Canada to $33,838,500.

Canada has been credited with the cost of the new Welland Ship Canal—a total of $128,000,000.

The total net cost to the United States is made up of $65,100,000 for channel deepening and other necessary works in the Upper Lakes Section, plus $178,561,000 in the International Rapids Section, giving a total cost to the United States of $243,661,000. It is understood from the State Department in Washington that a reduction of about eight and one-half million dollars will be effected in the Upper Lake channels due to savings already achieved or expected. The above total for the United States includes the cost to the United States power works.

The above figures do not include the cost of installing the power house machinery or equipment necessary for the development of power in the International Rapids Section, as this is to be financed independent of the Treaty—in the case of Canada, by Ontario.

The Dominion–Ontario Agreement

Under the Dominion-Ontario agreement, the Dominion, in the event of the St. Lawrence Deep Waterway treaty being concluded and ratified by both High Contracting Parties and in the event of the power works and the common works being constructed, agrees to make available to Ontario for the development of power all the Canadian share of the flow of the water in the International Rapids Section of the St. Lawrence River available for power purposes—Ontario agreeing to supply to the Dominion at cost such power as may from time to time be required for the operation of locks or for other purposes of navigation in the said section.

The costs of works solely for navigation, such as locks, are to be assumed by the Dominion; and the costs of works solely for power are to be assumed by Ontario. The costs of works common to navigation and power are to be divided between the Dominion and Ontario. Under this arrangement Ontario will pay to the Dominion for the Crysler Island development $27,115,700 on November 1st of the year 1938; and for the Barnhart Island development $35,846,800 on November 1, 1941. Ontario also agrees to pay to the Dominion the actual cost of certain substructure works which must necessarily be deferred until such time as the power machinery and equipment is being installed (the present estimated cost of these deferred works being $2,677,500), and also to pay to the Dominion additional amounts equivalent to the actual cost of the engineering services for the design of the power works (at present estimated at $1,562,500), in the event that the Dominion makes arrangements for the financing of these items.

The agreement has proceeded upon the basic principle that with normal conditions Ontario will be in a position to market power on the St. Lawrence by November 1, 1938. It is recognized, however, that in the light of the world-wide depression prevailing at the present time a certain lag in the development of the power market may be anticipated. To provide flexibility necessary to meet this eventuality, the agreement provides that Crysler Island payment may be postponed by Ontario until November 1, 1942, and the Barnhart Island payment until November 1, 1945. Further, to provide for the contingency of a delay in the completion of the works, Ontario will always have one year after completion in which to make payments. These provisions are, however, governed by a requirement that Ontario must in any event make the payments as soon as the power is used.

Upon the completion of the payments, Ontario shall be deemed the sole owner of the works constructed solely for power purposes on the Canadian side of the International Boundary, and of the Canadian share of the power in the International Rapids Section of the St. Lawrence, and shall also be deemed to have (but only for power purposes) the perpetual right to use, in common with the

(Continued on Page 39)

The Cultural Bond Between China and Japan*

By PROFESSOR KIANG KANG-HU
Director of the Department of Chinese Studies, McGill University

ABOUT half a year ago, the Japanese military clique began a barbaric attack against China, with deliberate destruction of Chinese properties and wholesale slaughter of Chinese civilians, women and children, which has caused all Chinese patriots to vow a hateful revenge against Japan, with stubborn resistance to Japanese aggressors and complete boycott of Japanese goods. As a result, the outside world generally thinks that these two Oriental nations must have been incompatible in nature and age-long enemies. A brief review of the past will reveal the untruth of this conception; on the contrary, Chinese and Japanese racial and cultural bonds are so intimate and close that friendly co-operation and perfect harmony between them is not at all impossible, if the international policies of both were well and wisely directed. I shall here mention only a few outstanding facts, definitely recorded in our official standard dynastic histories and commonly accepted by the scholars of the two countries, as silent but eloquent witnesses to my assertion. These will serve to show also how much Japan is indebted to China, body and soul, and further illustrate the inexcusable gross crime which her military clique and party politicians have committed towards her historical fatherland in the recent events.

From the beginning of our written history, Japan was known to China as the Three Fairy Mountains (San Shen Shan). Owing to the many mystic stories told by the early Taoist adepts, the First Emperor of the Ch'in dynasty frequently ordered official expeditions to the Eastern Sea for the searching of angels and seeking of "immortal doses." The largest group of three thousand boys and girls was led by Hsü Fu (also incorrectly known as Hsü Shih) and sailed in the year 219 B.C. They reached the south tip of the main island of Japan and never returned. This is the first definitely recorded Chinese colonization of Japan; many more followed and some even preceded this date. The tombs of Hsü Fu and six other leaders of the expedition in Kumano are even today well preserved and highly worshipped by the Japanese. The 2,000th anniversary was celebrated three years ago by a joint effort of both Chinese and the Japanese governmental officials and prominent citizens.

The aborigines of Japan, the Ainus, who belong to the Slavic family of the Caucasian race, had been gradually pushed back further north by the newcomers from Korea, China, and the Malay Islands; these three elements, combined and mixed with a small percentage of aborigines, make up the modern Japanese. Of the three elements, the Koreans were probably the most, and the Malayans the least numerous, but since most of the Koreans were originally from China and all of them were Chinese citizens or subjects, at least three-fourths of the modern Japanese are of Chinese blood, chiefly of the Han race. Chinese surnames are not uncommon in Japan and many of the Japanese noble and scholarly clans are traceable to Chinese origins. On the other hand, even in modern times, we have General Cheng Ch'eng-kuang (known by the Japanese title as Koxinga), the great patriotic hero of the late Ming period, and Priest Man Shu, the revolutionary poet-philosopher of the late Ch'ing period, both by Japanese mothers.

As to the cultural relation, I dare say that everything in Japan, prior to its contact with the West and aside from its modern material accomplishment, is Chinese. In religions and philosophy, Confucianism is still the dominant teaching of Japanese individual, family, and social life. Buddhism, with its various sects, was introduced from China and not from

*This paper was prepared at the request of *The Aryan Path* of Bombay, India, and was read before the International Conference on Far Eastern Studies in Chicago some months ago.

India. All Japanese Buddhist patriarchs were either disciples of Chinese priests, or disciples of their disciples. During and after the T'ang dynasty, hundreds of Japanese government students enrolled in the Chinese Imperial University and thousands of Japanese Buddhist priests travelled as pilgrims and studied as disciples in Chinese monasteries throughout the Empire. Besides K'ung Hai of the T'ang mentioned below, Tiao Jan and Chi Chso of the Sung are the better known Japanese Buddhist scholars who stayed long in China. It was a common practice for Japan to appoint Buddhist priests as envoys to China, for Japanese Buddhists differed from Chinese Buddhists only in one thing, namely, the former were generally allowed to retain their secular relations as to family obligations and government services while the latter except the Chü Shih or laymen, were obliged to sever all worldly connections and live away in temples or hermitages. This explains also the fact that Buddhist influence over politics in Japan has always been more direct and much greater than in China. This condition remains the same today. The only Japanese life lost in Shanghai last January, which served as the excuse for the Japanese bombardment of the Chinese residential sections of that city, was a Buddhist priest participating in a street riot.

In the early Ch'ing period, Chu Chih-yü (Better known as Chu Shun-shuei), a Chinese philosopher and member of the Ming royal family, who fled to Japan and spent his life in Edo, afterwards Tokio, was the tutor and advisor of the Tokugawa Shogunate and had among his pupils many great Japanese scholars and statesmen. Even Shintoism, which is supposed to be a primitive native religion of Japan, was not in its present shape till the introduction of the Taoist religion from China, and its very name is of Chinese words. Many Chinese heroes, including Hsü Fu, are among the Shinto deities for national worship.

In literature and art, the Japanese had no written language except that of the Chinese, which was adapted after the beginning of our period of the Six Dynasties. A Japanese Buddhist, whose name was K'ung Hai in Chinese and Kobo Daishi in Japanese, returned from his 25 years' study in China during the T'ang dynasty, invented the kanas (Japanese pronunciation for Chinese words "Chia Ming," meaning "borrowed terms") from Chinese writing and used them as phonetic guides to Chinese characters. Since then they have become the Japanese alphabet for modern and vernacular literature, but all important and substantial words are still Chinese. Chinese classics, prose and poetry, are standards of Japanese writers. All branches of literary and non-literary arts in Japan are imitations of Chinese schools. The historical temples of Nara and the Great Buddha of Kumakura were done by Chinese workmen. In government and society we find all systems and regulations bearing the Chinese nature, letter, and spirit. All great political movements in Japanese history were inspired or influenced by Chinese teachings. Most of the heroes in the Great Reform were followers of Wang Yang-ming's philosophy. Many of the present day Japanese costumes and manners are remnants of the T'ang dynasty or earlier.

Japan has helped much to preserve old Chinese customs. In this respect the Japanese are decidedly more conservative than the Chinese. We often have to go to the interior of Japan to study and identify things and names recorded in our old literature which have long been lost in China and therefore the records have been rendered unintelligible to the modern Chinese.

In the Chinese Dynastic Histories, Japan has been recorded as a regular tributary to China since the year 108 B.C. after the reconquest of Korea by Emperor Wu Ti, of the Western Han dynasty. In 56 A.D. of the Eastern Han, a State Seal was granted to the ruler of Japan by Emperor Kuang-wu, through the former's tribute-bearing envoy, after that period, every ten years or so, we find records of Japan's official visits to the Chinese court. The tributes from Japan were usually clothes, pearls, precious stones, slave girls, etc., while the return gifts of China were in general silk, tapestries, mirrors, and swords, together with gold and silver money. Despite the change of many dynasties in China, even during the period of the Southern and Northern Empires, when China was torn by foreign invasions, civil wars, and revolutions, the Japanese tributes came frequently and uninterruptedly. In 421 the ruler of Japan was given the title Great General (Ta Chiang Chün) by a Sung Emperor of the Southern Empire, and in 504 he was promoted to the rank of Prince (Wang) by a Wei Emperor of the Northern Empire.

The original name for Japan was O, or O Nu, so recorded in Chinese histories. It is but a Chinese pronunciation of the name

of the aborigines in Japan, Ainu, but it has a bad meaning in Chinese characters which read "short slaves." In 607 the Japanese ruler first spoke of himself to Emperor Yang Ti of the Suei dynasty as "King of the Rising Sun Country," which was considered by the latter as impolite. Not until 670 of the T'ang dynasty, the name Jih Pen was definitely chosen by Japan and officially sanctioned by China. It is made of two Chinese characters: Jih meaning "Sun" and Pen meaning "Root." These Chinese words have been pronounced by the Japanese as Nippon and afterwards translated by the Westerners as Japan. This has since become the standard name for Japan and is commonly used in China, though the old name O, or O Nu, is still quoted by the Chinese and it is much resented by the Japanese.

From the Chinese Dynastic Histories we learn that, in paying the regular tribute, Japan was required to present through its envoy a formal petition acknowledging the supremacy of the Chinese emperor. Twice during the Sung dynasty Japanese tribute was rejected and an imperial audience was denied to its envoy on account of the irregularities of this petition. The position of the Japanese envoy or tribute-bearer in the imperial audience was always among those from Korea, Loochoo, Burma, Siam, Annam, and other eastern tributaries. In 1509 of the Ming it had been permanently fixed at the seventh row of the western side of the palace, directly facing the Korean envoy.

The international relations between China and Japan continued to be peaceful and harmonious until the Mongols conquered China. The Mongols were the most militaristic and imperialistic people of the Orient and their Kahns were ever longing for further conquest. Since Japan had been a tributary of the overthrown Chinese Sung dynasty and always friendly and sympathetic towards the Chinese people, she refused to pay homage to the new Mongol Yuan dynasty. In 1264 and in 1266 Kublai Kahn sent direct envoys to induce Japan to submit, and in 1267 and 1269 he ordered the Koreans to pursuade the Japanese to follow their suit, but all in vain. In 1270 he dispatched once more an imperial commission, which succeeded in bringing Japanese tribute-bearers for the following years. In 1275 Kublai declared war upon Japan for the first time. Despite the large fleet and the superior firearms commanded by Mongol and Chinese generals in three successive expeditions, Japan was not beaten, and the Japanese tribute never came again to the Mongol court. This punitive measure of the Mongols and its failure has since altered the international situation between China and Japan.

When the Yuan dynasty was ended by a Chinese revolution and the Ming dynasty was put in its place, the Japanese government again accepted China's supremacy and paid tribute from time to time. Unfortunately, just about this time, the Chinese pirates along the sea-coast became very active and Japanese pirates joined them in frequent pillage of Chinese ports. Beginning with the first year of the Ming in 1368 until 1592, when Korea was for the first time invaded and conquered by Japan (Korea was regained by China in 1589), Japanese officials visits and Japanese pirate raids appeared alternately in China.

During the periods of the Chia Ching (1522–1566) and Wan Li (1573–1619), the provinces of Chihli, Shangtung, Kiangnan, Chekiang, Kuangtung, and Fukien suffered almost yearly from Japanese piracy. On many occasions the districts, cities, and towns were seized, officials murdered, and hundreds of lives and public and private properties destroyed. In 1549, 1554, 1563, 1602–7, and 1613, the Japanese penetrated further inland in large numbers. Nearly all the rich cities in the lower Yangtse Valley were subject to their invasion and temporary occupation. The area was even larger than that covered by the recent Japanese inroad from Shanghai. The Ming government imposed severe laws prohibiting any communication between China and Japan except by official orders. Famous Chinese generals, such as Ch'i Chi-kuang, Hu Tsung-hsien, Wen Ju-chang, and T'ang Shun-chih, fought many glorious wars in defence of their country. When the Manchus established themselves in China, the Japanese first attempted a sympathetic aid to the Ming dynasty, but finally accepted the supremacy of the Ch'ing dynasty. They have, nevertheless, been less friendly and more suspicious towards the Manchus than they were towards the Chinese, and their tributes came to the court very irregularly. An equal position with, and an aggressive action against, China was, however, not manifested until after the Great Reform of Japan in 1868.

In spite of the racial resemblance and

cultural similarity between China and Japan, there is an outstanding diversity in the histories of the two countries. China has, as a rule, been governed by civilians, and Japan from the beginning by its military caste. Since 221 B.C., during the reign of the first Emperor of the Ch'in dynasty, China has been rid of the feudal system, while Japan lived in it until the fourth year of Meiji, 1871. The reason why China has changed many dynasties and Japan remains under one and the same ruling house is simply because the so-called ruling house was merely a figure-head and its actual ruling power rested upon the Shogonate, which literally means inherited military dictatorship. This great diversity has shaped the two peoples in different dispositions and characteristics which in turn determined the histories of the two nations. The causes of this diversity are numerous and complicated. Geography might be its prime and fundamental one. It is nothing strange to find two peoples of the same origin developing along diverse lines, since brothers, sisters, and even twins often grow vastly apart. The Japanese government, since the Great Reform, though having gone through many changes of political parties and military cliques, has maintained its definite policy at least in two points: First, a wholesale and whole-hearted adaptation of western civilization with all its related materialism, industrialism, imperialism etc.; and second, the expansion of Japan, territorially, politically, and economically, at the expense of the weakening and breaking down of China. Sometimes this policy has brought up strong reactions among the Japanese upon national and international issues, but, viewed as a whole, it has been a hereditary policy throughout modern Japanese history.

China is probably the only empire in the history of the world that has been built up not by conquest but by being conquered. Since the Huns, the Tartars, the Mongols, and the Manchus could conquer China with much smaller and inferior forces than those of the Japanese, and establish their dynasties in China in respective periods, why not also Japan? Since China could absorb all her former invaders and conquerors and make their descendants thoroughly Chinese, why not also the Japanese? The reasons for a negative answer to the above questions are three: First, China has been newly awakened with a national consciousness which is something strange and foreign to her but has been forced upon her by the modern imperialist powers, including Japan. It is growing and spreading and will finally make China a modern nation despite her past. Second, Japan has been too much westernized: she would make China her colony and not her home, Chinese her subjects and not her fellow citizens. She would come to China as an alien master and not as an adopted son. This could never be tolerated by the Chinese. It is the very thing that caused the Mongols to be driven out while the Manchus remained. Third, both China and Japan are at present members of a world family. They are no more isolated but interdependent, not only between themselves but also with all other nations. The world has become so small and sensitive that any change of international conditions between two members will certainly affect the whole. Though other powers are much occupied with their respective troubles, they cannot afford to allow Japan alone to dominate China. Though all nations are selfish and no substantial help can be expected from a third party, yet because of their selfishness their interference and protest may be counted upon for the sake of their own interests.

By following the present international policy, Japan can hardly gain much from China and great harm is almost certain to both China and Japan and also other nations. Military resistance, economic boycott, and national hatred have been increased and intensified in China against Japan. If another world-war should result, whether China were driven into extreme nationalism or into radical communism, no benefit could be drawn either by Japan or by the world. In this brief review of the historical relations, especially the racial and cultural bonds existing between China and Japan, may I say that I am truly grieved by the recent actions of Japan in China. To right this great wrong is the duty of the Japanese people as well as of the Chinese.

Book Review

THE LAW OF REAL PROPERTY *by the late* W. DEM. MARLER, B.A., D.C.L., LL.D., *edited and completed by* GEORGE C. MARLER, B.C.L. *Published, 1932.*

FOR many years the legal world has waited for a book on the Civil Law of Quebec written in English. Quebec authors have

written books on law in English, and good books: the names of Lafleur and Laverty will occur to the minds of many readers at once, but neither of these wrote on what might be called the distinctive doctrines of the Civil Law. The comprehensive and scholarly work of Dr. Mignault, while written with clarity and precision, is yet *terra incognita* to many lawyers in the other Provinces. This is in the highest degree unfortunate. The dream that haunts many of us of a Canada where a national legal system has been developed, combining the best features of the Common and Civil Law, with what is antiquated in each put aside, can never come true until the members of the legal professions seriously strive to discover and understand the point of view of those who have been trained in a system different from their own. Prejudice and ignorance, we may some day discover, go always hand in hand.

For this reason, if for no other, the work of Dr. W. deM. Marler is indeed welcome. The lawyers of the "English Provinces" have now lost all excuse for not learning at least one branch of the Civil Law, and that perhaps the most distinctive. They do not all know French, but they all can read and understand a book as scholarly and clear as this one.

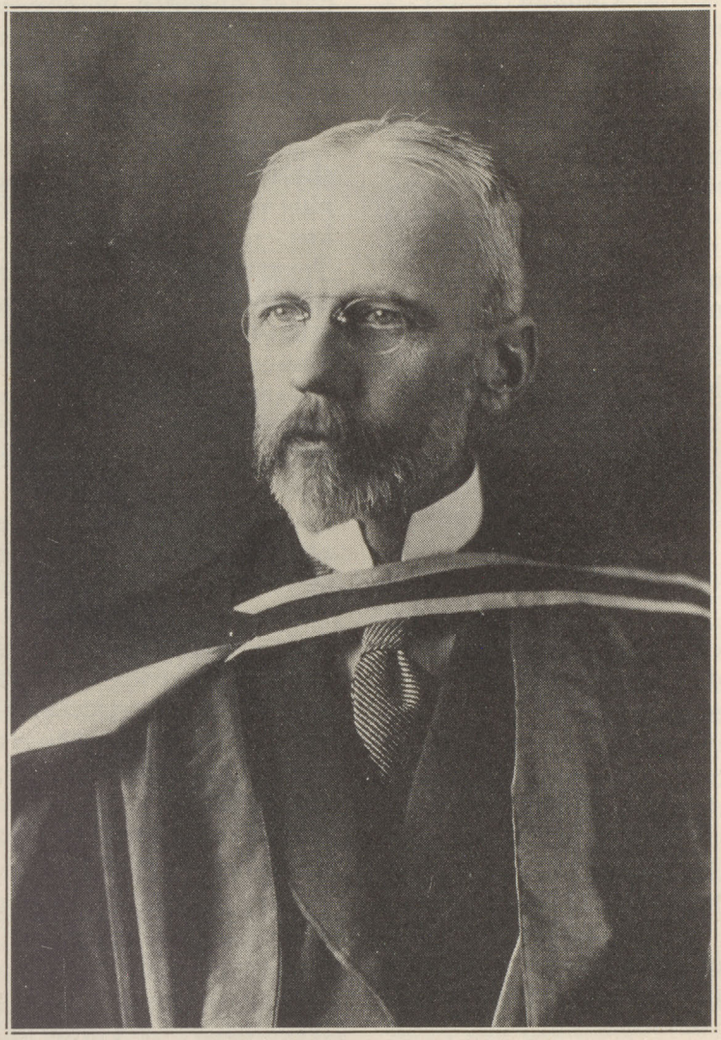
That the work is scholarly is no matter for surprise to those who knew the late Dr. Marler. His wide experience as a Notary Public and his many years of teaching at McGill University gave him an unequalled opportunity to study the law of Real Property in both its theoretical and practical aspect. Law is one of those subjects of which only the active practitioner can hope to obtain personal knowledge of the more intimate problems, and nothing is better for obtaining a grasp of underlying theories than attempting to teach a class of students who, while they differ in capacity, are alike in their lack of knowledge. A mere practitioner may err in the direction of over-emphasis of minute detail—a man who has only taught and not practised may be in danger of being carried away by some wind of doctrine. The ideal writer is one who has had experience in both directions. Such a man was Dr. Marler; a scholar, a teacher, and the guiding spirit of a large notarial firm, he came to his task well fitted and his book has more than met the expectations of his many admirers.

While the bulk of the work was finished during Dr. Marler's lifetime—indeed, its basis is obviously his college lectures—it was not ready for the press at the time of his death. To his son, Mr. George Marler, was committed the delicate task of preparing the book for publication, and this labour of love he has carried out with conspicuous success. Wherever possible, he has left the text of his father's work untouched, contenting himself with footnotes and small interpolations to cover changes in the texts of law and the trend of judicial opinion. Certain necessary additions are from his pen, and they are by no means the least valuable parts of the book.

In its main arrangement this work follows the Civil Code of Quebec. This is a wise plan, particularly for Quebec lawyers and students, but the subjects treated are not entirely those found in the Civil Code. Thus, there is a most valuable chapter on Tenure of Land and one on Forced Sales, where a considerable amount of procedure is introduced as well as substantive law. The questions raised by our law regarding Married Women are discussed with great clarity, and there is, in particular, a brief account of the Law of Dower. The manner in which references and authorities are introduced is most commendable. We do not find, as in many other law books, a thin stream of original work running between thick banks of authorities. The bulk of the work is a straight-forward exposition of the law. This is particularly useful for the student and for those who are reading the book to find what the law really is, not searching for authorities to bolster up a case and overwhelm an Appellate Court by sheer weight of learned references.

I have quite frankly sought in this review to commend the book to lawyers in other Provinces and to those who, while not members of the notarial profession or of the Bar, need to know the Quebec Law with regard to Real Property. I need not, I am sure, urge upon the legal professions in my own Province, the value of such a book. It is my sincere wish that the graduates and students of McGill University, which so signally honoured Dr. Marler during his life, will pay tribute to his memory and to the efforts of his son, by giving this work the reception it deserves.

HAROLD E. A. ROSE,
B.A. (Toronto), B.C.L. (McGill), LL.M. (McGill).
Editor: *Bench and Bar*



PAUL THEODORE LAFLEUR

Paul Theodore Lafleur

By MARGARET BARNARD PICKEL

THERE is much talk of teachers' training colleges in our times, and many cunningly contrived courses in the science of education. People are beginning to feel about teaching, as about everything else, that you must take courses in it if you are to know anything about it. Some of us, however, continue to think that teachers are born, not manufactured, and surely a few drops of Lafleur blood will help to make a better teacher than any training college can turn out.

Paul Theodore Lafleur came from a family that was distinguished for interest in education, and his two brothers, in addition to notable professional work, contributed to their University teaching of a very special order. McGill may well take pride in her three Lafleur sons, and Paul was not the least of them.

Learning and teaching were the great passions of his life. It was significant that he never spoke of himself as a professor, but always as a teacher of literature. To him literature was the greatest and most important of subjects. Logic and philosophy had their place, but literature was high above them. Whenever people bored him with talk of politics or other overweening interests and demanded some conversational response, he would crush them with his special formula, "My dear sir, I am a teacher of literature and I have no interest whatever in the subject under discussion."

Yet his mind and interests were not narrow. How could they be when he had spent his life with books? He had a profound knowledge not only of English literature but of the literatures of the Romance languages as well. Born in a bilingual family, and brought up with a knowledge of other languages, he had an unusual equipment for the comparative study of literature which has his delight. There were three kinds of reading, he used to tell us, recreational reading, analytical reading, and comparative reading. He always named the last with a fine climactic emphasis and with that quick smile and light in the eye that marked his enthusiasms.

Many men read and study all their lives. Many bring a good educational equipment to their reading. But Professor Lafleur brought something better than mere appetite for books and good training, the fine instrument of a keenly critical mind that made him master of what he read and helped him to fit it into its proper place in the great record of the best that had been thought and said in the world. He had a remarkable feeling for literary tendencies and movements and an unerring eye for influences and likenesses.

He was the last man to want to mould his students. He had a deep respect for the individual and nothing but scorn for what he called "pawing over the minds of students and impertinently imposing opinions," yet he left a definite mark upon the mind of every intelligent student who sat under him. He gave to each of them one of the greatest gifts that can be passed from one mind to another, a fine literary standard and a glimpse of the high pleasure of critical appreciation.

It was an education in itself to watch that judicious, eager intellect, to see the independence of its view, its quick swooping on quackery and cheapness, its brave rise to greatness. He had an emotional response to literature, but his tribute was never merely emotional. He intellectualized his emotions. He was never left speechless by great poetry or prose. He could tell you why it was great. He was not afraid to get near enough to analyse it.

There was a fearlessness in his mind, a distinct Protestant quality. He never gushed. He could be brave and iconoclastic in his opinions. Names never frightened him; he could see where the master hand had trembled, find inadequacies in great work. The French side of his mind gave him a feeling for form, a dislike for the inchoate, the fumbling. He had no use for the primitive; his taste was for the finely finished, the polished.

He could condemn, but with what perception and generosity he could praise. He would scorn the claptrap of Bulwer Lytton, the ornate pretentiousness of Disraeli, but how those quick, nervous eyes would sparkle when he talked of Fielding's splendid masculine strokes, of Thackeray's acuteness, and Swinburne's melodiousness. How he would read

great passages and close the book with a little snap of satisfaction, to look eagerly at the class for a response to the author that he loved.

His foibles were the delight of the students. A highly organized nervous system made noise an intolerable irritant and it was a red-letter day when some noisy fooling penetrated the walls of his classroom and "Polly" would run out, his gown flying behind him, to rail at the disturbers. "God bless my soul, gentlemen," he would cry, "will you never learn to conduct yourselves properly?" He would come back, his eyes still blazing, triumph in every feature, give a final glower, and mutter, "How can one give one's mind to the consideration of literature with such intolerable disturbances!" Then he would settle himself to his beautifully tidy notes and go on with the lecture.

He was a prime squasher. Irritation seemed to stimulate him intellectually and he gloried in the neatness of his thrust. Woe to the cheeky boy who lounged up on the platform to give some feeble excuse for poor work. "Polly" would bristle with indignation. "What do you mean, sir," he would say, "by thrusting yourself upon me in this way? Please remove yourself from my lecture platform." He had a store of stock phrases to meet impertinence, and used at times, with pardonable pride, to suggest, as he discussed unpleasant characters in books, cutting remarks that might be made to such people.

He loved young people as he loved books with discrimination. He was not made to suffer fools gladly; he hated rowdiness and bluffing; no one could turn more scathingly on what he called "an impudent young jackanapes." But let a student show intelligence, interest, and independence of opinion, and he was eager to catch it, happy to praise it. He loved his graduate students, for had they not chosen literature as their special study, proving that, like him, they thought it the most important in the curriculum? They had a new status, they became his friends, almost his confrères. He sang their praises. "That boy," he would say, "has quality in him." "That young woman has a lovely mind." He was full of pride in their promise and achievements.

Some few of them he admitted to a personal intimacy. That was a rare privilege, but it was always open to any one of the elect who showed affection for him. It was then that one realized the depth of his emotional capacity, which was rarely tapped and perhaps the richer for it. Then his heart ruled his head, for he could see no faults in his favourites.

He was never possessive. There was a fine reserve in his affection, but one had only to show the need for it, to make a personal claim upon him, and it was evident, warm and steady. He had a little defensive shyness that prevented him from taking the first step. You said: "May I come to see you?" and "Polly's" face lit up and there was an eager invitation to tea.

Tea with "Polly" was a real occasion. Nobody could make one feel so welcome, so prepared for, so fêted as "Polly." For that afternoon one was the apple of his eye. There was the ceremony of taking off one's wraps in that chaste bedroom, with its many pairs of gloves arranged side by side on the table top. There was the choosing of a chair that must be both comfortable and becoming, the supply of pound-cake especially laid in, the rite of making tea over sterno, the careful pouring of the cream and tea alternately into the cup, the cutting of the cake with a villainous-looking hunting knife. He never drank the tea or ate the cake; it was all for his guest. Sometimes he would bring out a bottle of wine, saying that one looked pale, and hover anxiously about until he was assured that it had taken effect and one felt strong and spirited again. Always there were one's favourite cigarettes, and sweets to take home.

His conversation during the visit was a delight. What good talk there was about books and how seriously he took one's opinions. He could make a shy boy or a gauche girl feel not only interested but strangely interesting. Often there was a sensitive drawing out of one's personal interests and affairs. Part of his affection was to anticipate imaginary slights that might be offered to his protégées, with fiery threats of what he would do in that event. "Only tell me, my dear," he would say, "and he shall have me to deal with."

He had a great interest in love affairs, which he discussed with the delicate reserve of a confirmed bachelor. He was quick to scent successful romance and seemed to know instinctively whenever one of his students was engaged. He liked to give the impression that, while he had never come in, he knew that the water was fine. "I have never been engaged,"

he would say, "but I have sailed very close to the wind several times."

He answered every letter with a flattering promptness on the day it was received. What kind notes he could write in that graceful hand when things went amiss. In times of real trouble what a comfort he could be, what an eager champion and tender friend. He had a fund of compassion that was strangely moving in a man of his habitual reserve. When he felt pity, he was no longer afraid of an affront. He could give himself completely and let one see the depths of a nature singularly rich.

Life was not easy for him. His frail physique and nervous weakness were a heavy cross. "Thinking of my health and measures to preserve it," he wrote in one of his last letters, "will always be a damned nuisance to me." He hated the rigours of the Montreal winter, which he was fond of saying was only fit for fur-bearing animals, and he determined to follow the sun when he retired. He wrote gaily, almost boyishly, of his plans for a winter in Egypt, cut short, alas, by his death in the Valley of the Kings.

Yet he would not have been happy for long away from familiar surroundings and the busy intellectual life that he loved. A man who loves books is never lonely, but he needed his students and the stimulant of teaching. There is a peculiar immortality for a fine teacher. His influence never dies; it increases rather. There is a sudden touching of a spark in a student, some instant focussing of interest, a curious new direction of purpose. Another teacher is conceived in that moment in the classroom; another young person dedicates himself. There begins one of the sweetest of associations, that of the master and the apprentice, and in time the apprentice, with the mark of the master upon him, goes out to carry the fire to a new altar. So the fire passes from one generation to the next. Surely Paul Lafleur lives, as he would like to live, in the minds of his students and of their students after them.

The St. Lawrence Waterway Treaty

(*Continued from Page 30*)

Dominion, the common works which have been constructed in the said Section.

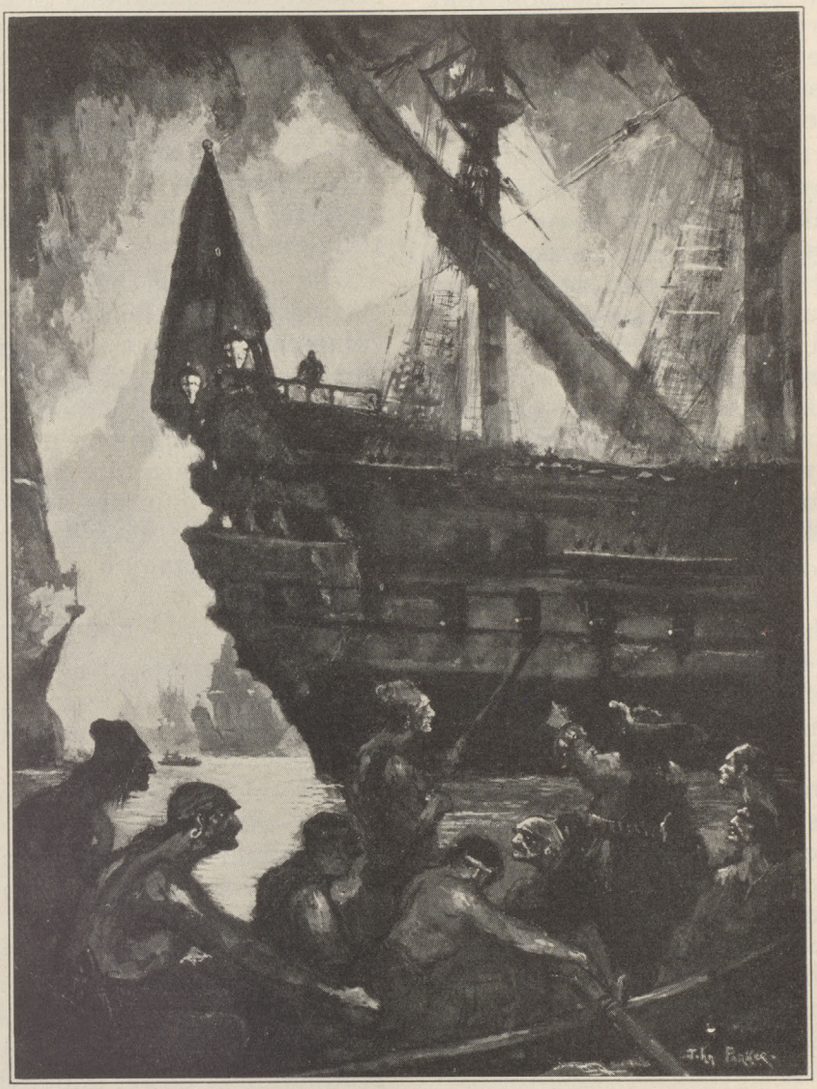
The agreement provides that Ontario shall be represented on any Board or Commission, and on the engineering staff responsible to any such Board of Commission, which may be set up for the design, construction or operation of the power works and the common works, and furthermore that Ontario shall be responsible for the design of all power works on the Canadian side of the International Boundary and its approval to be required as to the stability and suitability of all works necessary for the development of power—the Dominion retaining the responsibility for the design of the navigation and common works and the Dominion's approval being required as to the stability and suitability of all power structures and as to the provision for the passage and for the regulation of water through all power structures.

The Dominion will maintain and operate the works until the dates upon which Ontario commences the initial deliveries of power from the Crysler Island and Barnhart Island, respectively. Subsequent to such respective dates, the Dominion, at its own cost, will maintain and operate the navigation works; Ontario will maintain and operate the power works; and the Dominion will maintain and operate the common works, the cost of such maintenance and operation to be shared equally by the Dominion and Ontario.

In the interests of navigation in the Great Lakes and the St. Lawrence River, and in the interests of power development in the Nipigon, St. Mary, Niagara, and St. Lawrence Rivers, the Dominion and Ontario have mutually agreed that the water of the Ogoki River (approximately 4,000 cubic feet per second) which now finds its way into the Albany River and then into James Bay may be diverted into Lake Nipigon and thence into the Great Lakes—St. Lawrence System.

As a final provision Ontario agrees to do all things reasonably necessary to expedite the production of power under the agreement and, pending the completion of the power works, not to proceed with the securing of other supplies in excess of the quantity of power which may be necessary for the supply of its reasonable requirements.

The Agreement is made subject to approval by the Parliament of Canada and by the Legislature of the Province of Ontario. If the St. Lawrence Deep Waterway Treaty has not been ratified by the High Contracting Parties thereto within three years from the date of the Agreement, either party may, on notice to the other, cancel this Agreement.



THE ARRIVAL OF THE KARRER REGIMENT IN THE WEST INDIES

From a painting by the author of the accompanying article.

The Karrer Regiment

A Foreign Legion in Canada and Louisiana

By J. DELISLE PARKER

A FEW years ago the writer of this paper was expressing to a fellow-passenger his admiration of the glories of Canadian history and of the noble pile of Quebec, which our liner was then passing. This gentleman, possessing both education and business ability, tried to dampen enthusiasm in the Dominion's past by asserting that history was of no interest since, in his opinion, it had no practical bearing upon the present. A few months later, the boom days had come to an end, and November, 1929, had taken its place with the similar crisis of 1719 in the annals of the past. Hence it is not without interest to note that some two hundred years ago, in the midst of one of the greatest financial crashes on record, a regiment called Karrer was organized for service in Canada and other French colonies in America, and that this military co-operation was part of an effort to restore public confidence in possessions overseas, especially Canada and Louisiana, as well as in the national credit in general.

France had indulged in a frenzy of speculation that has since become legendary, and the boom had been largely based on belief in the boundless natural resources of North America. In the course of a few years, however, confidence evaporated and panic ensued; for, with the realization that quick returns from colonial trade were unlikely, it became evident that the value of shares in the great directing India Company was chiefly represented by paper, practically worthless in the hour when public faith departed.

In the reconstruction period that rapidly followed, a serious effort was made to exploit the vast lands across the seas that belonged to France. The Karrer Regiment was intended to play a prominent rôle in this laudable purpose, and detachments were ordered to Canada, the West Indies, and Louisiana.

Before giving an account of the regiment, it may be well to recall the progress in the half century preceding the financial débâcle of the Colonies that were to be the background of the unit's activities. In Canada, the year 1665 had been outstanding, since it had seen much growth of population and the coming of the Carignan-Salières Regiment. Among the newcomers were memorable figures —Père Marquette and Joliet—and in the ranks of the Carignans were courageous soldiers, destined to chastize the Iroquois and also to found Canadian families whose names are written large in the Dominion's history. For the first time, determined steady progress in colonization on the St. Lawrence was made.

The struggles of the colony, its profitable fur trade, and the indications of endless territorial expansion and commercial enterprise were already inflaming the imaginative French race. As the young nation overseas restlessly pushed to the west and south, making possible even the discovery of a road to far Cathay, romantic minds in Europe became more and more interested. These factors encouraged France to plunge into vast and uncertain financial schemes.

Among those following the spirit of adventure came the young Robert Cavalier de La Salle. Soon after reaching the frontier post of Montreal, he, too, became hypnotized by the idea of a road to China. So, in jest or all seriousness, his grant of land near the exposed settlement became La Chine. However, instead of travelling westward to the land of Kublai Khan, he explored the Mississippi to its mouth and took possession for Louis Quatorze. Unknowingly, he planted the seed for Law's Mississippi schemes and the disastrous sequel.

On both sides of the Atlantic there were, by this time, men of wisdom who could foresee the possibilities of a united colony, which, if properly developed and sustained by force of arms, would eventually extend from Mexico to the polar regions, and almost from sea to sea. It was an epic period, with great heroic figures—the Comte de Frontenac, his friend La Salle, Père Marquette, and the sons of Vérendrye and Charles Le Moyne. Two of the last named, both native Canadians, carried on the work of La Salle on the Lower Mississippi. The elder son, Iberville, born in Montreal in 1661, was a distinguished officer

in the French navy and is regarded as the Father of Louisiana. His younger brother, Bienville, also in the royal marine service, founded New Orleans and spent nearly twenty years in Louisiana. A firm connection between Quebec and Louisiana was established, through numerous forts and trading posts on the great rivers and lakes. It only remained for these two colonies, really one, to be settled and exploited.

It was at this point in history that a Scotchman named Law stepped on the stage. With the sweep of vision of a Cecil Rhodes, this astounding man ranks as a giant in the financial history of the world. At a critical moment in the national bankruptcy, following a series of costly wars, Law was entrusted with the re-establishment of France's credit. Unfortunately, his famous "plan," by which paper was substituted for gold, to be redeemed ultimately by trade in the colonies, became a source of gambling and exploitation by the Regent, acting on behalf of the youthful Louis XV, and also by ministers and the people. His sounder schemes of colonial commerce demanded time, labour, and co-operation. They were obviously less appealing and before much could be accomplished, the public had lost confidence and the crash came. But still hopeful of reward, the colonial development was pushed on and, as part of it, the Karrer Regiment was created.

The necessity of sending more troops to maintain order in such vast territories was evident. In Canada, whose influence on Louisiana from the period of discovery to that of the settlement of Acadian refugees was great, there had long been established a strong military nucleus, with the disbandment of the Carignan-Salières. As Francis Parkman states "the Canadian population sprang in great part from soldiers and was to the last systematically reinforced by disbanded soldiers." The officers, a prominent part of the new noblesse, were poor but valiant lords of the wilderness. Frequently their "seigneuries" comprised a tenancy of their former soldiers, now a militia. Their sturdy progeny, born and raised amid primitive surroundings, inherited both military tradition and love of adventure.

Incidentally, governor Denonville describes the Canadians as being "tall, well made, solidly built (bien plantés sur leurs jambes), robust, vigorous, and accustomed in time of need to live on a little." The same gentleman, himself far from perfect, adds that "they have intelligence and vivacity, but are wayward, lightminded, and inclined to debauchery." The children are described as being half savage and half naked. Another European official ascribes the lack of education and respect to "La folle tendresse des parents, qui les empêche de les corriger et de leur former le caractère, qu'ils ont dur et féroce."

Nevertheless, these sons and daughters of the Carignans and other settlers had a profound devotion for the land of their birth and breathed, like their parents, a new spirit of freedom. Verchères, Varennes, Sorel, Contrecoeur, and Chambly in the Dominion, and Castine in Maine, vibrate with heroic memories worthy of Cyrano de Bergerac and his "cadets de Gascogne." Families like these, along with small detachments of troops, kept intact the chain of communication that ran from Castin's fort at Pentagoët in southern Acadia to Louisbourg in Cape Breton, from the Atlantic to Quebec, and on through the long canoe journey on inland seas and mighty streams to New Orleans and the Gulf of Mexico. All told, they were but a handful holding a great empire, and the motherland was wise in sending reinforcements to her scattered sons.

In Louisiana, the monopoly of trade had brought nothing but loss to Crozot, a moneylender of Toulouse. His privilege was passed on to the India Company, under the control of the Regent and of Law. To describe this financial advisor to the throne as an unscrupulous person is singularly unjust. In the year 1717, Law was in his prime, forty-six precisely, immensely energetic and still of an unusually handsome appearance. As the spoilt son of a wealthy Edinburgh family, he had seen much of gay life in London. The death of an opponent in a duel had been the cause of an imprisonment which had been followed by escape to the continent. For years he had travelled and gambled most successfully. Somewhat of a mathematical genius, he became tremendously interested in banking methods, and, having discovered, as he thought, their underlying principles, after twenty years of study, he imposed his dynamic personality and theories of credit and exchange on the Regent and government of France. Immediately he became one of the leading figures in the country. Thanks to him, bank notes appeared in the realm for the first time, despite vigorous



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by J. Delisle Parker

THE KARRER REGIMENT, CANADA, 1722

This photograph, taken at the 1931 Colonial Exhibition in Paris, by special permission of the French Government, shows how the Karrers were armed and equipped for service in North America.

opposition, and for the next few years he practically harnessed the resources of the nation to his schemes. The India Company, absorbing the Compagnie d'Occident, was to be his main agent in sustaining by actual trade the fabulous amount of paper placed in circulation. "Mississippi" was on all lips.

At the height of the financial battle, Law's schemes were hopelessly crippled by previous public debts thrust upon him and by the duplicity of the Regent and his unscrupulous courtiers in suddenly taking control out of the financier's hands. Inflation followed and, as Law fought against an ever advancing wave of disaster, panic took full sway, until in 1720 he was forced to flee to Brussels, a poorer man than at the outset of his meteoric career. Conceit, pride, and stubborn confidence in his own ability were probably his worst faults. His conception of North America's future has been more than justified. As La Salle died a bankrupt and failure, shot by a mutinous follower on the lonely wastes of the Mississippi, so this Beau Brummel of finance ended in abject poverty. It is bitterly ironical that the lands traversed from the Great Lakes to New Orleans by La Salle, and whose possibilities Law could foresee, have since produced untold millions of wealth.

In 1719, the India Company, and Law, were taking steps to people the colonies and protect them with troops. Knowing of the martial ability of a certain Chevalier Francis Adam de Karrer, of Soleure, they authorized him to raise a battalion in Alsace and Switzerland for service overseas. The Chevalier accordingly formed his regiment at Besançon, on the eastern frontier, and a few months later had marched it to the port of embarkation. But the Regent, with the prospect of another outbreak of war, desired to have the unit under his direct control and turned it over to the regular forces.

An official document, dated November 5th,

1719, states that "The King having judged fit to take into his service a Swiss battalion, composed of three companies, to be placed in garrison at Port Louis, His Majesty has found it good to entrust the Sieur Karrer, former Captain and Commander of a Battalion of the Swiss Regiment of Buisson, with the raising and command of the said battalion . . ."

It is thus made clear that the Chevalier Karrer was not a novice in war. He no doubt needed unusual strength of character to direct the warriors of mixed races that were ultimately to constitute his corps. Details are given in the succeeding paragraphs as to the formation of companies, which could be as large as two hundred and fifty men, and the choice of officers. This appointment of officers was left to the commander "provided, of course, he does not propose incapable ones." Each company was to have a captain, two lieutenants, one second-lieutenant, an ensign, and eight sergeants.

Furthermore, the Sieur Karrer was permitted to enroll men from all the countries allowed in "Swiss" troops, and to transport overseas with them their families, each woman and child receiving a small pay. The term of enlistment was for three years, with transportation back to France, if so desired. And, finally, we learn from the document that a chaplain was to be attached to the regiment. It is apparent that the authorities hoped the Karrers would remain in America as colonists.

The wisdom of all this contrasts with the wild boom days in Paris. There, amid scenes of enthusiasm, fortunes changed hands of an afternoon, and great lords were ruined while their valets became millionaires. In fact, it was not an uncommon spectacle to witness a grand seigneur arriving in his gilded coach but sadly departing on foot behind it, minus town house, horses, and carriage, with his servants now reclining on the cushions of the newly acquired vehicle. Constructive work was planned for a slower but more lasting success of a great empire across the waters. If this work had been consistently supported, the course of history would probably have been greatly changed.

In the above paragraphs the use of the word "Swiss" demands some explanation. As a matter of fact, Switzerland for centuries had been a recruiting field for foreign armies. The surplus male population of this vigorous race of mountaineers served as professional soldiers on more than one battlefield of France. Even at Rome today, the Swiss Guard of the Pope is the survival of a long and, for Switzerland, cherished tradition. The loyal Swiss troops of Louis XVI and Marie Antoinette died bravely in the Tuileries, facing the fierce revolutionary horde. And to the present time men from Switzerland can be found in the ranks of the Foreign Legion, in outposts from the Sahara to Tonkin China.

Albert Depréaux, in his recent book on the French Colonial Troops, states that the Regiment of Karrer became "une véritable Légion Étrangère" and that, like the Legion, it maintained a fine military reputation. In which case, the regiment may be considered the ancestor of the present organization, whose glory and adventures are so well known.

During about half a century of service under the name of Karrer, the regiment included not only Swiss and men of Lorraine, but others from Denmark, Sweden, Germany, Luxembourg, and Poland. La Rochelle, of so many famous memories, soon became the headquarters of the First Company, or Compagnie Colonelle, and depot of the regiment. It was the business of the other companies to furnish men for ships and colonies. Hence, it was a sort of Marine Corps, soldiers and sailors too.

Immediately after its formation, the Second Company left for Martinique and the third embarked for Saint Domingo. In the following year, the records show a detachment at Ile Royal, or Cape Breton, in Canada. Finally, in 1731, the Fourth Company proceeded to Louisiana, and three years later occupied Cayenne. In 1752, the regiment had ceased to exist under the name of Karrer, and became the Hallwyl Regiment. Such, briefly, were the milestones in the story of this famous corps.

These somewhat bare facts take on a more human aspect when one considers the unit's service, from the great fortress of Louisbourg on Ile Royale, to the picturesque, gay, and eventful life on the Mississippi at New Orleans, and still further to the old buccaneer haunts of the West Indies and Antilles. Appropriately, on the Regiment's white banner, sprinkled with golden fleur de lys, was written, "Fidelity and Honour on Land and Sea." "Honour and Fidelity" are the words written large on the tricolour standards of the present Foreign Legion, replacing the usual French regimental motto of "Honneur et Patrie." The "Patrie" of these soldiers of the eighteenth century, like those of the twentieth, was their regiment and many lands the scenes of their labours.

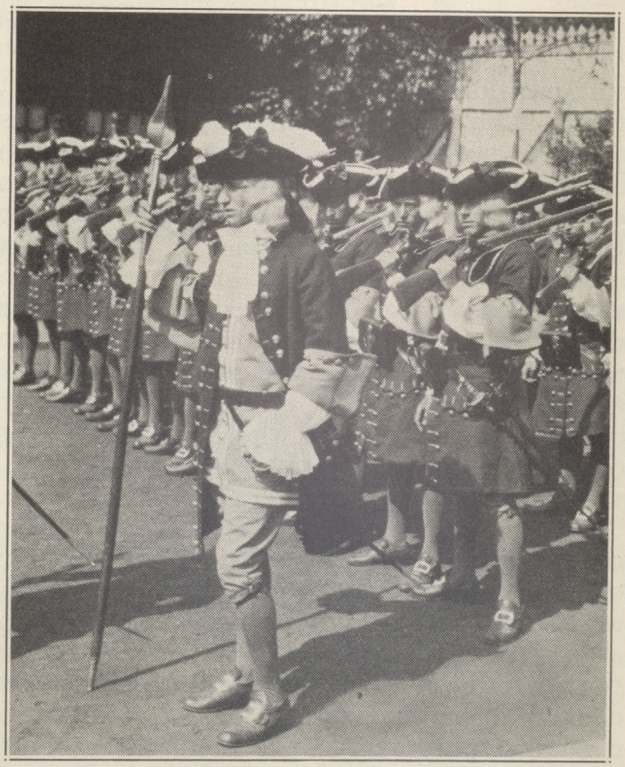
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When the detachment of the Karrer Regiment went to Ile Royale in Canada, in 1722, the fortress of Louisbourg had been in the process of construction for nearly ten years, and required many more before its completion. On this stormy picturesque coast the French intended to construct an impregnable stronghold to protect the St. Lawrence and defy all enemies. The first assault on it was made in 1745 by the combined strength of the New England Colonies, under William Pepperell, and an English fleet, commanded by Warren. After a siege of forty-eight days these forces, amounting to four thousand men, compelled the surrender of Louisbourg and its handful of troops, who had maintained a lively resistance. A communication of a Monsieur de Chambon, dated September the second, indicates the presence of the Karrers, for it describes the martial efforts of some eighty soldiers, French and "Swiss," commanded by Mr. Deganne, captain, and Rasser, a Swiss officer. We also know that another Swiss officer, Koller, was second-in-command to Sieur de Braubassin at the head of five hundred young men of the country, of militia and filibusters, who seem to have made themselves a great nuisance to their enemy.

At the time of the final attack in 1758 by the British and provincial troops, with vastly greater numbers on both sides, the Karrer Regiment had changed its name to Hallwyl, and was providing garrisons, chiefly for Louisiana, Saint Domingo, and Martinique. Nevertheless, in this great assault by Amherst and Wolfe, there were, besides the battalions of the Regiments d'Artois, Bourgoyne, Cambes, and many companies of colony troops from Canada, some "Volontaires Étrangers." and two companies from the Antilles. The mention of the Volontaires Étrangers, or Foreign Legion, and the troops from the Antilles suggests the strong possibility that some of the old Karrers took part in the siege. Four years later, with the collapse of France as a great power on this continent, with the exception of the Lower Mississippi area and in the Carribean sea, the Hallwyl Regiment was suppressed.

In the dusty archives are probably still hidden interesting details of the story of the Karrer Regiment. It is with difficulty that many of the facts in this paper have been brought to light. Nevertheless, we possess some valuable information concerning the uniforms. Like the traditional tunic of the British soldier and Royal Marines, these "Swiss" soldiers of fortune wore a red coat. It resembled a long frock coat, with huge pockets and skirts, called a "justacorps" and was of a deep red in shade. The large cuffs and stockings were blue. With their three-cornered hats, white wigs, and buckled shoes, the Karrers presented a striking appearance, if one can judge from the group representing them in a parade of the old colonial regiments in Paris, when the photographs accompanying this article were taken. The drummers revelled in a similar long coat, but blue in colour, and embellished with an elaborate design of many hues that was repeated on the drums themselves. These were hitched up higher than is the custom today and, like the flags, were sprinkled with golden fleur de lys.

The detachments that had been sent to Louisiana were naturally of great importance to the rising colony. In the boom period of Law's great schemes some colonists went willingly to America, but masses were literally dragged overseas and press gangs were often the means of their embarkation. "Filles à marier," of good and bad repute, were also



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THE KARRERS ON PARADE

These men from the present-day Colonial Army of France represented the Karrers at the French Colonial Exhibition of 1931, accurately portraying the Regiment's appointments. In Mr. Parker's article, the uniforms and armament are described.

sent across the waters. "Manon Lescaut," a famous novel of the eighteenth century, to be rendered more famous in our times by Massenet's opera "Manon," was inspired by one of the ladies in the colony. The name of her lover, Chevalier des Grieux, was that of an officer commanding an emigrant ship.

Thus north and south this early Foreign Legion of the Chevalier de Karrer saw much travel and adventure. In San Domingo these white-wigged soldiers drank, smoked, and listened to thrilling yarns of old buccaneers. They knew the charms of the creole town of New Orleans and of the Mississippi. For many years they stood guard on the grim and weather-beaten ramparts of Cape Breton and Canada. Adventurous sons of many races, these soldiers of the Regiment of Karrer, and one might add of Law, the visionary financier, formed an interesting feature in a stirring chapter in the last half-century of France in the New World.

Artificial Transmutation of the Elements

(*Continued from Page 24*)

conservation of energy as well as of momentum. The mass of the lithium nucleus together with the mass of the swift proton is greater than the masses of the two *a*-particles into which it breaks up. On the Einstein theory, a decrease of mass in a system involves a liberation of energy in some form. Calculation shows that the energy of motion of the two *a*–particles into which lithium disintegrates is in approximate accord with that calculated from the change of mass involved. The whole process is thus consistent, as far as observation has gone, with the conservation of energy.

Preliminary observations have also been carried out on the effect of bombardment of other elements by protons. Boron, fluorine, aluminium all give particles resembling *a*–particles which have a definite characteristic range in air. Similarly, some particles are ejected from beryllium, carbon, nitrogen, calcium, potassium, iron, nickel, cobalt, copper, and silver, while the heavy elements lead and uranium show some effect. The number of particles liberated varies markedly from element to element. The results so far obtained are of a preliminary character and much detailed work with chemically pure elements will be required to determine the nature and energy of the ejected particles and of the residual nucleus. It may be that in some elements more than one type of transformation is possible and more than one type of particle is ejected.

Sufficient observations, however, have been made to indicate the importance and power of these new methods of investigating the transmutation of elements. It will be of great interest also to carry the experiments further and to examine the effects produced by swift bombarding particles of different masses, but obviously such experiments will involve much time and labour to carry out over a wide range of elements and over a wide range of voltage. It seems clear that this new method of attack, so successfully begun by Cockcroft and Walton, will in the course of the next few years give us much new information to help us in throwing light on the structure of nuclei and on the problem of the transmutation of the elements.

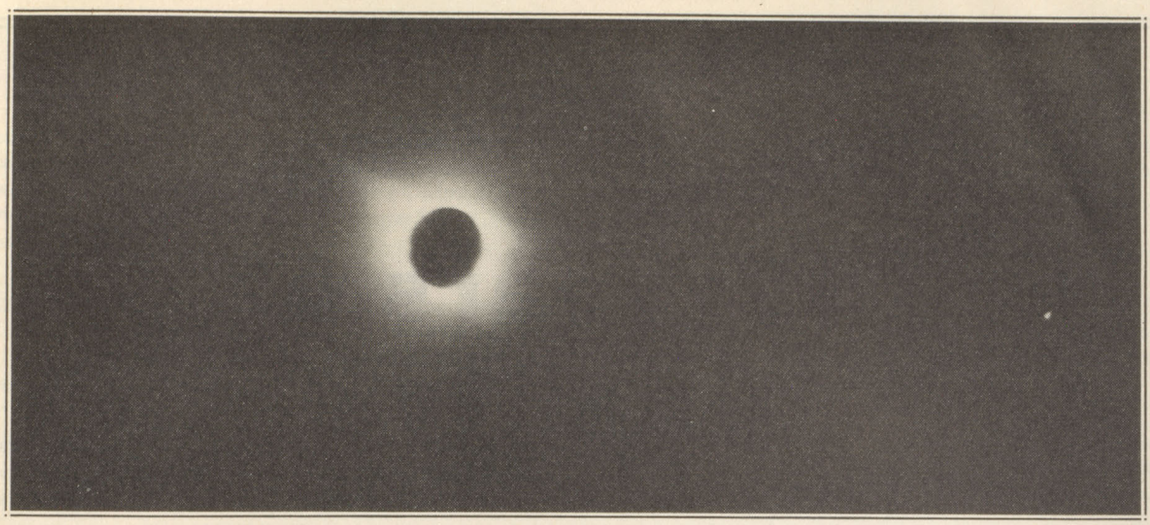
The Imperial Conference, 1932

(*Continued from Page 19*)

treaty, the principal products of Southern Rodesia —tropical fruits and agricultural products—are granted preferential treatment. In return, Southern Rhodesia will grant a selected list of Canadian products particularly favourable treatment, and will accord the bulk of other Canadian products treatment not less favourable than accorded similar products of the United Kingdom.

Canada—South Africa

The agreement between His Majesty's Government in the Dominion of Canada and His Majesty's Government in the Union of South Africa for the first time in history places the trade of the two countries on a treaty basis. In comparison with the existing Canada-Australia and Canada-New Zealand treaties, the Canada-South Africa treaty is limited in extent, nevertheless it offers improved opportunity for trade in a number of commodities, notably Indian corn or maize from South Africa, and motor cars from Canada. As in Canada's other inter-Dominion treaties signed at Ottawa, this agreement runs for 5 years and may be denounced on 6 months' notice. All the treaties are subject to the approval of the parliaments of the countries concerned.



THE TOTAL ECLIPSE OF THE SUN, AUGUST 31, 1932

This photograph was taken at Sorel, P.Q., by S. J. Hayward, Montreal, from the deck of the S.S. *Richelieu*, which carried the excursion organized by the University's Department of Extra-Mural Relations. Note the million-mile corona of the sun on the left and the planet Jupiter—the small speck near the picture's right edge. Copies of this photograph may be obtained from the Department of Extra-Mural Relations: Price twenty-five cents.

University News and Notes

ADAMS SCHOLARSHIP FOUNDED

Through the generosity of Dr. Frank D. Adams, former Vice-Principal of the University and Dean of the Faculty of Science, there has been established at McGill "The Adams Scholarship" of $600, to be awarded annually for work in geology in the Faculty of Graduate Studies and Research. Division of the scholarship was announced for the present year, $350 being awarded to N. L. Wilson, of Birch Hill, Sask., who will study certain aspects of Mount Johnson in the Province of Quebec; and $250 to J. J. Harris, of Montreal, who will study the stratigraphy of talaeozic rocks near Montreal.

ZOOLOGY APPOINTMENT

Dr. Harold B. Fantham, of the University of the Witwatersrand, Johannesburg, South Africa, has been appointed to succeed Dr. Arthur Willey as Strathcona Professor of Zoology at McGill. He was educated at University College, London, and Christ's College, Cambridge, being a gold medallist and Derby Research Scholar at the former and Darwin Prize man at Cambridge. In the Great War, he was Honorary Parasitologist to the Western Command and then Protozoologist to His Majesty's Forces in Salonika. He is a Fellow of numerous scientific societies, and in 1920 was a member of the Government of the Union of South Africa's Sleeping Sickness Committee. He has published more than 100 scientific papers.

HELMINTHOLOGY DEVELOPMENT

At Macdonald College on August 8 Federal and Provincial authorities were impressed by the value to sheep and swine breeders of a demonstration by Dr. R. L. Conklin, Assistant Professor of Animal Pathology, which revealed that, when treated by laboratory methods, the examen of livestock will show the nature of parasitical disease. Previously the slaughter and dissection of representative animals in an infected group had been considered necessary. The new method may save from slaughter prize stock which formerly had often to be destroyed.

GRADUATES' EMPLOYMENT BUREAU

Though carried on under most difficult circumstances, the work of the Graduates' Society Employment Bureau in the period from April 1 to June 30, 1932, has met with a definite measure of success. In the three months 94 men and 17 women registered with the Bureau. Employment for the majority was impossible to obtain, but 8 men and 3 women were permanently placed; and 5 men and 1 woman secured temporary employment. Of the 8 men permanently placed, 4 were engineers, 2 were commerce graduates, 1 was a teacher, and 1 a chemist. Of the 3 women placed, 2 secured secretarial posts and 1 a teaching position. The address of the Bureau is McGill University, Montreal.

A DELICATE OPERATION

An interesting operation took place in the Royal Victoria Hospital, Montreal, in June, when Dr. F. A. C. Scrimger, V.C., Assistant Professor of Surgery at McGill, removed a darning needle from the base of the heart of a young woman, who had been directed to the hospital by medical authorities in Kitchener, Ontario. The needle had become deeply embedded in the heart some six months previously, without serious effects at the time, but its position was becoming dangerous and the delicate operation for its removal, necessitating a division of the breast bone, a lifting of the heart in the operator's hand, and a forcing of the needle back by the path of its entry, was found advisable. Some weeks after the operation, the patient was reported to be well on the way to full recovery.

MEDICAL MUSEUM SCHOOL

Under the direction of E. Lionel Judah, Curator of the University Museums, the third Summer School in Medical Museum Technique operated at McGill this year. Instruction in pathological and anatomical museum technique was given, ten one-hour lecture and demonstration periods, and twenty two-hour practical laboratory sessions were included,

(Continued on Page 52)

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Personals

THE McGILL NEWS welcomes from graduates personal items for inclusion in these columns. Press clippings or other data should be addressed to H. R. Morgan, Esq., Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates Society, McGill University, Montreal.

THE FRENCH GOVERNMENT TRAVELLING SCHOLARSHIP at McGill, valued at 10,000 francs, has been awarded to Miss Anne Marie Dubois, B.A. '32, who will study at a university in France next year.

PROVINCE OF QUEBEC SCHOLARSHIPS for study abroad have been awarded to James G. Nelles (economics) and Donald L. Blair (architecture).

1851 EXHIBITION SCHOLARSHIPS for study abroad, valued at $1,000 a year for two, or in some instances three, years, have been awarded to J. F. Heard, Ph.D. '32, and M. K. McPhail, Ph.D. '32. Dr. Heard and Dr. McPhail took their Ph.D's in physics and biochemistry respectively.

OSLER MEMORIAL SCHOLARSHIPS, of the Canadian Medical Association, have been awarded this year for the first time, the recipients being Dr. G. A. Copping, Med. '30, and Dr. G. T. Evans, Med. '32, who will carry out special research in Montreal hospitals and abroad.

KENNETH H. BROWN, Arts '29, Province of Quebec Rhodes Scholar, who took his B.A. in jurisprudence at New College, Oxford, in 1931, this summer headed the list of 53 successful candidates in the examinations for the English Bar. He was called to the Bar in June and will practice law in Canada.

REFERENCE IN THE PRESS to Dr. William Lovett, Med. '70, aged 90, as the oldest living medical graduate of McGill would seem to have been incorrect, as Dr. P. E. Brown, Med. '63, aged 95, is residing in good health in Ste. Anne de Bellevue.

DR. J. B. COLLIP *and* **DR. J. S. L. BROWNE**, of the Department of Biochemistry, were named as delegates from McGill to the International Physiological Congress in Rome this summer.

DR. R. TAIT McKENZIE, Arts '89, Med. '92, Ll.D. '21, is the designer of the John Webster Memorial Trophy recently presented by members of the late Mr. Webster's family for award each year on conditions approved by the Minister of the Crown responsible for civilian aviation to amateur flyers in Canada.

DR. LEYLAND J. ADAMS, Med. '27, has returned from the Peter Bent Brigham Hospital, Boston, Mass., and is practising medicine at 1374 Sherbrooke Street West, Montreal.

FARRELL J. VINCENT, Sci. '26, of L. J. Forget & Co., has been elected a member of the Montreal Stock Exchange and Montreal Curb Market.

H. G. LAFLEUR *and* **E. S. FAY**, Arts '29, were called to the Bar of England by the Inner Temple on June 8.

J. K. LORNE MacDONALD, B.Sc. '27, M.Sc. '28, an 1851 Exhibition scholar, has obtained his Ph.D. degree at Cambridge University.

DR. A. T. BAZIN, Med. '94, Professor of Surgery, represented McGill University at the centenary meeting of the British Medical Association in London in July.

MINA H. SMITH, Arts '29, who has been working and travelling in Europe, expects to return to Montreal in mid-September.

DR. C. T. LANE, Ph.D., has had his 1851 Overseas Fellowship extended for a third year and will continue work at Cambridge University under Lord Rutherford.

MISS HAZEL MURCHISON sailed on July 8 to represent the Alumnæ Association of McGill University at the triennial convention of the International Federation of University Women in Edinburgh.

MRS. W. H. H. NORMAN (Gwen R. P. Roberts, B.A. '29, M.A. '32), sailed with her husband in August to reside in Japan.

DR. DOUGLAS W. MacMILLAN, Med. '22, was a Progressive Republican candidate on August 30 in Primary Elections for the post of County Supervisor, 3rd District, Los Angeles, California.

HOWARD C. REID, Arts '29, who has held a Lord Strathcona Fellowship at Yale University, graduated there in June, having been granted the degree of Master of Science of Transportation.

DR. J. A. L. WADDELL, Sci. '82, who recently contributed to "The American Scholar" an article on "The Evolution of Art and Science in our Bridges," has joined the bridge department of Parsons, Klapp, Brinckerhoff & Douglas, consulting engineers, New York.

PEARL W. DURKEE, Sci. '06, is serving on the Faculty of the College of Mines and Metallurgy, University of Texas.

GEORGE E. CROSS, Sci. '23, is now on the staff of the Montreal Technical School, lecturing in mathematics and mechanical drawing.

MISS RUTH GRANGER, Com. '32, has been appointed secretary to Mr. Wesley Frost, Consul General of the United States in Montreal.

THOMAS HUGH DOHERTY, Sci. '29, has accepted an appointment with the National Research Council, Ottawa, Ont.

J. H. D. ROSS, Sci. '22, who has been associated with the firm of Guggenheim Bros., New York, for several years, paid a call at the offices of the Graduates' Society recently when passing through Montreal on his way to spend a holiday with Mrs. Ross and his daughter at Metis.

JOHN T. HENDERSON, Sci. '31, has been appointed assistant chemist with the Coca Cola Company at Montreal.

MEREDITH G. GLASSCO, Com. '31, has joined the staff of the Canada Life Assurance Company in Toronto.

FRANK CURRAN, K.C., Law '84, has been appointed to the Superior Court Bench, succeeding Mr. Justice J. C. Walsh, Law '94, who is appointed to the Court of Appeal and who, in turn, succeeds Mr. Justice E. W. P. Guerin, Arts '78, Law '81, who retired on September 1.

STANLEY A. NEILSON, Sci. '16, Chairman of the Collection Committee, Graduates' Endowment Fund and Secretary of Science '16, is now carrying on a general insurance business in Montreal. He was formerly a member of the Sun Life Group Assurance staff.

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MISS HELGA TAIT, B.Sc. '32, has been awarded a Fellowship in the Banting Institute, Toronto, for work in Bio-Chemistry.

MRS. WALTER VAUGHAN, M.A., Warden of the Royal Victoria College, sailed for England in July and is spending the summer travelling; she will return early in September.

MISS EDITH BAKER, B.A. '25, who has been in Japan on the staff of the Y.W.C.A. for three years, spent a few weeks in Montreal this summer, returning to Japan in August, to resume her work.

M. C. TEMPLE-HILL, Arts '27, Com. '29, has been admitted as a member of the Society of Chartered Accountants of the Province of Quebec.

DR. H. M. BUTT, Arts '28, Dent. '31, who spent last summer with the Grenfell Mission, Labrador, is now practising in Bombay, India.

L. V. PARENT, Agr. '12, after 12 years with Canadian Co-operative Wool Growers, Limited, has been appointed to act in addition as fieldman in the Province of Quebec for the Canadian Jersey Cattle Club.

THE MOST REV. J. F. SWEENEY, LL.D., Arts '78, Archbishop of Toronto and Metropolitan of the Ecclesiastical Province of Ontario, owing to failing health is retiring from active connection with the Church of England in Canada after more than half a century of service.

ERIC B. F. REDDY, past student, is a partner in a new radio advertising organization, with headquarters in Montreal, known as the Imperial Broadcasting Co.

AT OGDENSBURG, N.Y., on June 1, the Rt. Rev. James D. Morrison, LL.D., Arts '65, former Bishop of Duluth, and Mrs. Morrison celebrated the 63rd anniversary of their marriage.

R. B. CLOUGH, Sci. '17, has been promoted from the position of district traffic superintendent of the Ottawa suburban district, Bell Telephone Company of Canada, to be toll line engineer of the Eastern area traffic department, Montreal.

REV. HECTOR P. MOUNT, Arts '02, after 24 years as rector of St. Mark's Church, Longueuil, Que., has resigned that charge. He has also been rural dean of the St. Lambert deanery.

LT.-COL. H. J. TRIHEY, K.C., Law '00, represented the Montreal Harbour Commission at the inauguration and dedication of the port of Albany, N.Y., in June.

REV. A. K. McMINN, Arts '21, for six years pastor of the United Church, Kelowna, B.C., has been appointed to Wesley Church, Lethbridge, Alberta.

ALDERMAN W. H. BIGGAR, Arts '20, Law '21, has been installed as representative of the city of Montreal on the Protestant Board of School Commissioners.

G. VIBERT DOUGLAS, M.Sc., F.G.S., Sci. '20, has been appointed to take charge of the Department of Geology at Dalhousie University, Halifax, succeeding Prof. D. S. McIntosh. Prof. Douglas was chief geologist with Sir Ernest Shackleton's expedition to the Antarctic and also served for some time as chief geologist to the Rhodesian Congo Border Commission.

ERIC A. LESLIE, Sci. '16, has been appointed deputy comptroller of the Canadian Pacific Railway Company. A graduate of the old course

in Transportation at the University (where he was Editor-in-chief of the "McGill Daily"), Mr. Leslie joined the C.P.R. in 1919, after demobilization, and since 1928 has served as assistant comptroller of the System.

GERALD H. PHILLIMORE, Law '21, has assumed duty as Recorder of the Town of Plage Laval, Que. He is a member of the firm of Atwater, Beauregard and Phillimore, Montreal, and has served as secretary of the Montreal Bar Association and the Montreal Reform Club.

THE MEDICO-CHIRURGICAL SOCIETY OF MONTREAL has chosen Dr. A. T. Bazin, Med. '94, as its president for the ensuing year, with Dr. J. C. Meakins, Med. '04, as vice-president, Dr. C. F. Wylde, Med. '88, as trustee, Dr. C. J. Tidmarsh, Arts '16, Med. '24, as secretary, and Dr. E. S. Mills, Sci. '19, Med. '22, as treasurer.

REV. W. G. A. WILSON, Arts '13, has been appointed pastor of the United Church at Brinston, Ont., after some years at North Gower, Ont.

MAURICE C. LALONDE, Law '17, who has been head of the Montreal division of the Quebec Provincial Police Force, has become chief of the entire department, with headquarters in Montreal.

PERCY E. CORBETT, Arts '13, Dean of the Faculty of Law, was one of the speakers at the meetings of the Institute of Politics held at Williamstown, Mass., in July.

DR. JOHN L. CHABOT, Med. '92, of Ottawa, has been elected president of the Ontario College of Physicians and Surgeons, one of the few French-Canadians ever to occupy that office.

THE HON. E. FABRE SURVEYER, Law '96, has been re-elected one of the vice-presidents of the Canadian Authors' Association.

REV. RINALDO W. ARMSTRONG, recently of Morewood, Ont., has been inducted as pastor of the United churches at Gatineau, East and West Templeton, Que.

DR. JOHN McCOMBE, Med. '99, of Montreal, chief medical officer of the Canadian National Railways, has been elected chairman of the medical and surgical section of the American Railway Medical Association.

E. V. BROWN, Sci.' 22, for eight years a master at Appleby School, has been appointed master-in-charge of the Lower School at Ridley College, St. Catharines, Ont.

MISS M. WINIFRED KYDD, M.A., Arts '23, of Montreal, has been unanimously re-elected to the presidency of the National Council of Women. Miss Kydd was one of the Canadian delegates to the Geneva Disarmament Conference.

REV. DR. E. I. REXFORD, Arts '76, of Montreal, who on July 1 completed 50 years as English secretary of the Department of Education of the Province of Quebec, was tendered a complimentary luncheon by the Protestant committee of the Department at Knowlton, Que., when Hon. Walter G. Mitchell, Law '01, presided.

MAJOR J. P. LANDRY, Law '95, of the 6th Coast Brigade, Canadian Artillery, has been awarded the Canadian Efficiency Decoration.

DR. J. W. H. SMITH, Med. '21, who has been in Detroit, Mich., and Wheeling, W.Va., has returned to St. Thomas, Ont., where he has opened a practice of medicine.

(Continued on Page 55)

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If it is over a year old it may fail to do justice to those you wish to benefit or help. So many things could happen to make your Will quite inadequate—fluctuating values, death of beneficiaries named, transfer of property, etc., etc. Better re-read it quite carefully. Have your Lawyer or Notary revise it, naming us Executor and Trustee and be assured that your wishes will be carried out faithfully and efficiently.

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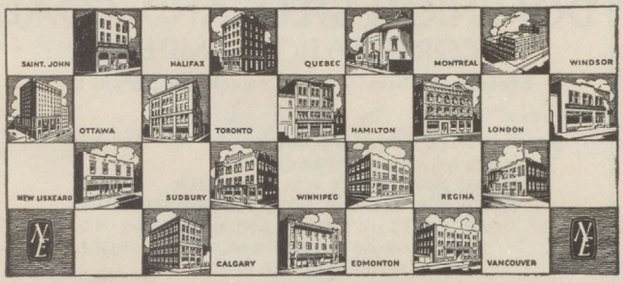
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Miss Helen S. Gairdner

TIME has removed an old, much loved, and honoured friend in Miss Helen S. Gairdner, who passed away in her 90th year, on August 12th, in Westmount, P.Q.

The Royal Victoria College said good-bye officially to Miss Gairdner in 1914, after she had served successively since 1872 as Secretary to the Ladies' Educational Association, the Donalda Department, and the College.

There is a story that once, when a little girl, Miss Gairdner was found crying alone, bitterly; she was so unhappy because she had nothing to do. Sixty years ago it was not easy for a young woman to find and make a path in life beyond the family circle. Her alert mind met a new movement with enthusiasm.

She helped students on their way to opportunity by a modest but determined and sustained effort on their behalf. She dearly desired their success; she narrowly watched their standard of conduct and their manners; she respected their individuality, and she enjoyed their fun.

A large company of her friends, from the earliest days of 1872 to the latest graduating class and undergraduates, gathered in the College on November 4th, 1914, to shew affection and honour to her. Through long years her eager mind had gone forward with every change to enjoy the larger sphere of usefulness. With every change in the personnel of the University and of the College, she had enlarged her loyalties and added to the number of her devoted friends.

Her unquenchable thirst for the old association often brought Miss Gairdner back to the Alumnæ and to the McGill Women's Union, and on intimate visits to the College, to share the latest good news, to enjoy the newest comer as well as the oldest friend.

ETHEL HURLBATT

University News and Notes

(*Continued from Page 47*)

and students who so desired were allowed two weeks of additional laboratory work for specialization in technique that particularly interested them.

MEDICAL LIBRARIES REPORT

Increased use of general library facilities at McGill, as noted in the June issue of *The News*, finds further confirmation in the Medical Library report recently issued. Readers for the period from April 1, 1931, to March 31, 1932, totalled 15,854, an increase of 1,000; and circulation at 13,911 showed a similar gain. Increased use of the Osler Medical Library is also noted, 75 undergraduates, 101 Montreal physicians, and 100 physicians from other cities

having used the library material for special research; and total attendance having increased from 582 to 703. More than 1,000 volumes were added to the medical libraries in the year; and notable money gifts were received from Dr. Casey Wood and Dr. H. Pittis, a graduate in 1901.

MEDICAL HONOURS

An impressive list of honours gained in the past year by members of the Faculty of Medicine appeared in a report presented some weeks ago. While it is impossible to list these in the space available, it is interesting to note that almost all departments of the Faculty are included and that recognition of the work being accomplished was afforded by medical and scientific bodies, not only in Canada and the United States, but also in Great Britain and Germany. Twenty-two members of the Faculty appear on the list of those to whom honours were awarded.

DR. H. S. BIRKETT HONOURED

In tribute to his outstanding services to the University over a period of many years, Dr. H. S. Birkett, C.B., former Dean of the Faculty of Medicine, Emeritus Professor of Oto-Laryngology, and original Commanding Officer of the University's overseas medical unit, No. 3 Canadian General Hospital (McGill), was the guest of honour of a number of his colleagues at a dinner in the Faculty Club, Montreal, soon after the June issue of *The News* went to press. The occasion marked Dr. Birkett's retirement from active work at McGill, but he will remain as an Emeritus Professor on the University staff and will continue to carry out the duties of his private practice.

BRITISH MEDICAL CENTENARY

Dr. A. T. Bazin, of the Faculty of Medicine, represented the University at the Centenary Meeting of the British Medical Association in London in July. Invitations to attend the ceremonies on this occasion were issued over the signature of Lord Dawson, of Penn, an old friend of McGill, and a number of McGill physicians and surgeons found it possible to accept. A special programme of marked scientific interest rendered this hundredth gathering of British physicians and surgeons one that will remain memorable for many years.

ROYAL EDWARD INSTITUTE

Affiliation of the Royal Edward Institute, Montreal, with McGill University was announced at the 22nd annual meeting of the Institute this year. The affiliation, it was stated, would be mutually helpful, as it would bring to the Institute the most advanced methods in medical practice and would provide the University with opportunity to furnish clinical experience in the treatment of pulmonary tuberculosis to students in the Medical Faculty.

UNIVERSITY FINANCES

Evidence of care in disbursing the University's funds and of the economy being practised in the faculties and departments is revealed in the financial statement presented to the Board of Governors in July. The year's estimated deficit of $420,908 had been cut by $83,674 to $337,234. Salaries and wages contributed $87,500 to this total and appropriations $47,500. An increase in fees, mentioned elsewhere in these columns, is expected to yield $60,000 next year. Three members of the Board of Governors, Messrs. F. N. Southam, Julian C. Smith, and George C. Currie, have been added to the University's Finance Committee.

(Continued on Page 56)

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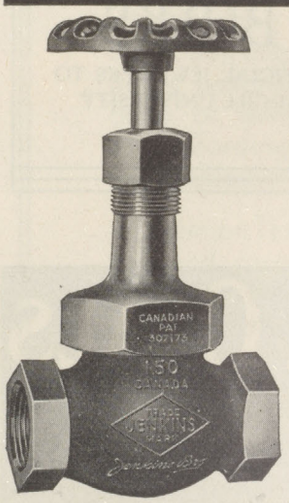
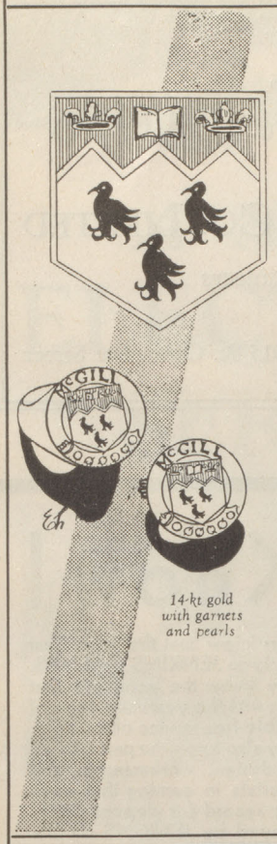


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BIRKS

OFFICIAL JEWELLERS TO McGILL UNIVERSITY

Births

BAIN—In Montreal, on May 8, to Archibald M. Bain, M.Sc. '29, and Mrs. Bain (Marion E. Ferguson, Arts '27), a daughter.

COUSENS—At Lachute, P.Q., on July 3, to Rev. Henry Cousens, Arts 22, and Mrs. Cousens, a son.

CROSS—In Montreal, on December 2, 1931, to George E. Cross, Sci. '23, and Mrs. Cross, a son.

ERLANGER—At Glens Falls, N.Y., on July 14, to Lester Erlanger and Mrs. Erlanger (Elsa C. Sommer, B.A. '27), a daughter.

FALLS—In Montreal, on June 25, to Dr. Franklin N. K. Falls, Med. '17, and Mrs. Falls, a daughter.

FERRIER—In Ottawa, on July 18, to Squadron Leader Alan Ferrier, R.C.A.F., Sci. '20, and Mrs. Ferrier, a daughter.

FOSTER—In Montreal, on July 9, to George B. Foster, K.C., Law '20, and Mrs. Foster, a daughter.

HARRIS—On June 10, to A. N. Harris, past student, Sci. '23, and Mrs. Harris, a daughter.

HODGINS—At Macdonald College, P.Q., on June 24, to Norris Hodgins, Agr. '20, and Mrs. Hodgins, a son.

LANTZ—In Charlottetown, P.E.I., on June 27, to Dr. Lantz and Mrs. Lantz (Dorothy Brodie, B.A. '26), a daughter.

MACLEAN—In Vancouver, B.C., on July 7, to H. Alan Maclean, Arts 24, and Mrs. Maclean, a son.

PIERCE—In Montreal, on May 17, to Sydney D. Pierce, Arts '22, Law '25, and Mrs. Pierce (Jean M. Crombie, B.A., '24), a son.

SELLER—In Montreal, on May 10, to Dr. C. R. Seller, Dent. '27, and Mrs. Seller, a daughter.

SHIER—On June 8, to B. B. Shier, Sci. '23, and Mrs. Shier, a daughter.

STEWART—In Montreal, on July 16, to J. Gordon Stewart, Arts '13, and Mrs. Stewart, twin sons.

THOMPSON—In Montreal, on June 17, to Gratton D. Thompson, Arch. '18, and Mrs. Thompson, a daughter.

WANKLYN—In Montreal, on May 18, to David Wanklyn, past student, and Mrs. Wanklyn, a daughter.

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V2

Marriages

APTER—In Montreal, on July 14, Miss Mollie Rabinowitz and Robert Apter, Sci. '30.

BURKE—In Westmount, Que., on April 27, Miss Helen Genevieve Smith and Thomas Vincent Burke, Arts '22, of Montreal.

CAMPBELL—In Quebec, on June 11, Miss Evelyn Constance Turner and Gordon Douglas Campbell, Arts '25, son of Dr. G. Gordon Campbell, Med. '89, and Mrs. Campbell, of Montreal.

COOPER—In Montreal, on June 26, Miss Fannie Cooper, B.A. '28, and Charles Hyman, of Montreal.

DURNFORD—In Montreal, on June 15, Marjorie Chaworth-Musters, only daughter of General Sir Arthur W. Currie, G.C.M.G., LL.D., '20, and Lady Currie, and Alexander Tilloch Galt Durnford, Sci. '12.

FLEMING—In Montreal, on July 4, Miss Gladys Elizabeth Mingle and Dr. Allan Jones Fleming, Med. '31, of Montreal.

FRASER—In Ottawa, on June 25, Miss Anne Brown Thackray and Andrew Stockwell Fraser, Sci. '22, of Cardinal, Ont.

GILL—In Montreal, on June 4, Miss Marie Florence (Trixie) Chaloner and Dr. McLean John Gill, Med. '32, of Woodsville, N.H.

GOLD—In Ottawa, on May 24, Miss Rebecca Laxer, of Montreal, and Samuel Gold, M.A., Arts '29, of Ottawa.

GORDON—In Paris, France, on May 18, Miss Mary McLernon and John Gordon, Sci. '26, of Montreal.

HILL—In Montreal on July 1, Miss Gwendolyn Mary Belyea and Dr. Allan Chaloner Hill, M.Sc. '27, Ph.D. '29.

JOHNSON—In Montreal, in June, Miss Margaret Isobel Dickie and Charles Henry Johnson, past student.

LOVERING—In Montreal, on June 2, Miss Hildred Douglass Clarke and William Langston Lovering, Com. '31, of Montreal.

MacINNES-LEGGAT—At Knowlton, Que., on August 27, Miss Margaret Jane Leggat, Arts '31, and Donald Alexander MacInnes, Sci. '23, of Montreal.

MURRAY—In Montreal, on June 11, Miss Alice Beatrice Dalrymple and Rev. Charles C. Murray, Arts '31, of Hamilton, Ont.

PEAT—In St. John, N.B., on July 25, Miss Frances Peat, past student, and George F. McAvity, of St. John, N.B.

RANKIN—At Dartmouth, N.S., on May 7, Miss Dorothy Cortlandt Rainnie and Dr. W. Donald Rankin, Med. '30, of New York City.

ROBERTS—In Toronto, on July 9, Miss Gwen Rhiannon Prys Roberts, B.A. '29, M.A. '32, and Rev. William Howard Heal Norman, of Toyama, Japan.

ROSS—In Montreal, on June 11, Miss Margaret Jean Mackay and Trevor Durnford Ross, past student.

SHARP—In Montreal, on July 16, Miss Frances B. Sharp, past student, and E. McKay Taggart, of Montreal.

SMITH-SMYTH—At Montreal West, Que., on June 18, Miss Margaret Lorraine Smyth, Arts '29, and Rev. R. Douglas Smith, Arts '29.

STAVERT—At Almonte, Ont., on June 25, Miss Kathleen Rosamond and Ewart Stavert, Sci. '14, of Montreal.

TRITT—In Montreal, on June 29, Miss Anna L. Tritt, B.A. '32, and Harris M. Silver.

WINTER—In Montreal, on July 16, Miss Etheljean Winter, student, and Alfred M. Talbot, of Montreal.

Personals

(*Continued from Page 51*)

MAJOR A. E. THOMPSON, M.C., D.S.O., Med. '13, of the Canadian Army Medical Corps, has been awarded the Colonial Auxiliary Forces Officers' decoration.

COLONEL R. F. STOCKWELL, Arts '08, Law '11, has retired from the command of the 4th Mounted Brigade, Canadian Cavalry, to the Reserve of Officers.

H. ALAN MacLEAN, Arts '24, is now a member of the law firm of Walsh, Bull, Housser Tupper & Co., in Vancouver, B.C.

HENRY BORDEN, Arts '21, a former Rhodes Scholar, has been appointed lecturer in equity at Osgoode Hall Law School, Toronto. He is a barrister-at-law of Lincoln's Inn and Osgoode Hall, as well as a member of the Bar of Nova Scotia.

CHARLES A. HALE, Law '12, has been appointed Recorder for the City of Westmount, Que.

MRS. LESLIE G. BELL, of Montreal (Miss Florence Seymour, Law '20), has been elected second vice-president of Zonta International, an organization of business and professional women, the annual convention of which was held in St. Louis, Mo., in June.

REV. W. P. WORNELL, Arts '15, has assumed charge of the United Church at Spencerville, Ont., after transfer from Inkerman, Ont.

CHARLES E. BROOKS, Sci. '08, has been promoted in the service of the Canadian National Railways to be chief of Motive Power and Car Equipment for the entire system, with office in Montreal.

DR. OSKAR KLOTZ, Med. '06, head of the Department of Bacteriology and Pathology at the University of Toronto, and Dr. F. M. G. Johnson, Sci. '04, Dean of Science and director of the Department of Chemistry at McGill, have been appointed members of the National Research Council for a term of three years.

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Deaths

AMBROSE, DR. THOMAS DOWNEY, past student, at Scarborough Bluffs, England, in July, 1932.

BROWN, FREDERICK BAYLIS, Sci. '03, M.Sc. '05, accidentally killed, at Lac Ouareau, P.Q., August 6, 1932.

CAMPBELL, DR. G. GORDON, Med. '89, in Montreal, June 26, 1932.

CARSON, DR. JOHN H., Med. '81, in Vancouver, B.C., May 17, 1932.

CRAIG, JAMES A., M.A., Arts '80, in Toronto, May 15, 1932.

HAYES, DR. JOHN, Med. '90, at Richmond, P.Q., August 19, 1932.

KEMP, DR. HOWARD DOUGLAS, Med. '90, at Rupert, P.Q., June 2, 1932.

KIRBY, SIDNEY S., past student, Sci. '08-'12, in Ottawa, August 22, 1932.

LYON, DR. GEORGE R. DOUGLAS, Med. '06, at Rivers, Man., July 30, 1932.

McNAUGHTON, MALCOLM EDWARD, Arts '30, in Montreal, June 13, 1932.

ORR, DR. JAMES E., Med. '88, in Detroit, Mich., June 14, 1932.

OWEN, HENRIETTA MACAULAY, past student, at Geneva, Switzerland, June 30, 1932.

THOMAS, JOHN WOLFERSTAN, Arts '98, in Montreal, July 29, 1932.

WINTER, DR. JACOB, Med. '27, in Montreal, June 11, 1932.

University News and Notes

(*Continued from Page 53*)

INCREASED FEES

As a necessary result of the University's financial difficulties at the present time, fees for all students have been increased, with effect from the opening of the present session, Arts and Science from $150 to $165, Engineering from $205 to $225, Medicine from $250 to $275, Commerce from $175 to $225, and other faculties and schools in approximately similar proportions. In addition, the Board of Governors announced that fees for students from outside the British Empire would be further increased, by $75 in the Faculty of Medicine and $50 in all other faculties and departments.

STUDENT LOAN ARRANGEMENTS

Plans for the operation of a loan fund to help students in the two final years at McGill who, through failure to secure summer employment, or for other reasons, find it difficult to finance further study, were announced by the University in July. The sum of $10,000 has been added to the University Loan Fund, the governing qualifications for assistance from the fund being the need of the student and his capacity and ability in his work.

DR. J. H. ROSS APPOINTED

Dr. James H. Ross, a graduate in Chemical Engineering in 1920, who received his D.Sc. from the University of Geneva in 1922, has been appointed to succeed the late E. Parke Cameron as Director of the Pulp and Paper Division of the Research Laboratories, University Street. Since 1921, Dr. Ross has been a member of the Forest Products Laboratories of Canada and has made valuable contributions to knowledge in regard to soda and kraft pulps. Since Mr. Cameron's death, he has been in charge of the activities of which his appointment as director is now announced.

OAT GROWING BENEFITED

Announcement of a discovery of primary importance to farmers in the Province of Quebec and throughout the Dominion was made in July, when it was stated that Professor J. G. Coulson, of the Plant Pathology Department at Macdonald College, had found a method of minimizing the effects of halo-blight, a bacterial disease that often seriously damages oat crops. Proper fertilization provides the controlling key. Nitrogen alone increases the incidence of the disease, as does lime. Phosphorus alone decreases the incidence, and potash alone is even more valuable, but Professor Coulson's experiments revealed that a combination of nitrogen, phosphorus, and potash, at the usual rates for good crop practice, provide a control that is highly effective.

LIBRARY STATISTICS

Proof of continued growth in the use of the University's libraries was furnished in a report presented to Corporation in April. In the period from January to the end of March, attendance increased by more than 3,000 over the figures for the same period in the previous year, and circulation increased by more than 20,000 volumes. Attendance and circulation figures have been increasing steadily and this report indicates that the library curve is still definitely upward.

SUMMER LIBRARY COURSE

The McGill Library School, the senior school of its kind in Canada, again conducted a summer course in general library methods. The course, which opened on June 6, ended on July 16, and was designed to prepare librarians for small libraries or assistant librarians for larger institutions. It fulfilled the requirements of the Board of Education for Librarianship of the American Library Association, by which it was fully accredited.

FRENCH LIBRARY COURSE

For the first time the University this summer offered a six-week library course in the French language. The course corresponded closely to the popular summer course in English conducted for some years past. The teaching staff included Dr. G. R. Lomer, University Librarian; Mlle. de Bondell, of the Washington County Free Library, Hagerstown, Maryland; Mlle. M. P. Parsons, of the Ecole de Bibliotheque, Paris, France; Monsieur A. Fauteux, Librarian, University of Montreal; and Miss H. Grenier, of the Roman Catholic Board of School Commissioners, Montreal.

DIET ARTICLE QUOTED

Subscribers to the *Reader's Digest* who are also readers of *The McGill News* will have noted in the *Digest's* August number a clever condensation of Dr. Rabinowitch's article "Man and His Diet" which appeared in *The McGill News* in June. Sale of the condensation rights was made on Dr. Rabinowitch's behalf soon after the article appeared, and *The News* would like to congratulate him on the widespread interest his article aroused.

GRASSHOPPER PROPHECY FULFILLED

In June, Mr. Arthur Gibson, Dominion Entomologist, presented in *The McGill News* an article on insects, the legend under one of the illustrations reading "Hordes of grasshoppers will appear in Western Canada in 1932." Knowledge that this prophecy would assuredly be fulfilled resulted, according to a Canadian Press despatch from Manitoba, in "one of the best organized campaigns" the

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NOT A McGILL MAN

Widespread press notices in July recorded the misadventures in New York of Otto H. Goldie, aged 76, who was first struck by an automobile, then lost his life's savings, and finally, after sinking unconscious from starvation in a vacant lot, was committed to a home for the aged poor. The reports stated that Mr. Goldie graduated in Medicine at McGill in 1881, and the University received an unsigned letter suggesting that aid to an unfortunate graduate might be granted. No trace, however, of Mr. Goldie's having graduated from, or attended, McGill is contained in the University's records.

RESIGNATIONS AND APPOINTMENTS

A number of resignations and appointments were announced following a meeting of the Governors in July, the resignations including those of Dr. Francis McLennan, B.A., B.C.L., LL.D., K.C., a loyal graduate of the University, who retired from the Board of Governors, and Dr. Helen R. Y. Reid, chairman of the Committee of the School for Graduate Nurses. Appointments included Dr. James Fulton, a graduate of Cornell University, as lecturer in philosophy, Dr. Ete Burg, of the University of Budapest as fellow in gynaecology and embryology, W. Bruce Ross, of McGill, as lecturer in mathematics, Professor R. B. Y. Scott as lecturer in Oriental languages, and a number of sessional appointments.

GIFTS AND BEQUESTS

Gifts and bequests to the University announced in July included the following: $200 from Dr. Francis McLennan for museum work; $600 from Dr. and Mrs. F. D. Adams for scholarships in geology; $4,000 as a contribution to The Flora Madeleine Shaw Memorial Fund, in the School for Graduate Nurses; $1,000 from C. W. Lindsay, Esq., for the University Cancer Clinic; $3,000 from anonymous for the Cancer Clinic; $500 from H. S. Osler, Esq., for the Osler Library; $240 from Miss I. McLennan for the Redpath Library (travelling libraries); and $4,500 from Mrs. N. C. Blacker for the Blacker Library of Zoology.

OLD MAP PRESENTED

An interesting photostatic reproduction of a map of the Island of Orleans in 1689 was presented to the University by the Hon. Mr. Justice Camille Pouliot, of Quebec, in July. The map, made by Villeneuve, Ingénieur du Roi, presents a detailed picture of the island, then known as the Ile de St. Laurens, and was obtained by Judge Pouliot from the Ministry of Marine in France.

PARALYSIS RESEARCH

Based upon the earlier findings of Professor John Beattie, of McGill University, interesting developments in the study of paralysis are reported by the Royal College of Surgeons, London, England, according to press despatches reaching Canada in July. The experiments revealed that muscles originally contracted by the motor nervous system will, after a period, contract through stimulation of the sympathetic nerves. Experiments now in progress will, it is hoped, demonstrate further how this knowledge can be used to the advantage of some paralysis sufferers.

DEATH OF NOTED ENGINEER

Graduates of the University learned with regret of the accidental death on August 6 of Frederick Baylis Brown, M.Sc., Graduates' Representative Fellow in Applied Science on the Corporation of McGill and one of the Dominion's foremost consulting engineers. Mr. Brown was killed by the propellor of a seaplane in which he and a number of guests were preparing to rise from Lac Ouareau, P.Q. He stood on the shore as the plane taxied in from the lake and, not realizing that the propellor would be spun again in the carburettor-draining spin, stepped directly into the path of the blades at the precise moment the switch was turned on.

RETIREMENT OF PROFESSOR MOORE

The closing of the last session at McGill marked the retirement of Professor A. J. B. Moore, head of the Department of Pharmacy since 1917. Professor Moore was to have retired a year ago, but upon the University's deciding to close the Pharmacy Department, elected to remain until the students in the Department had finished their 2-year courses.

X-RAY DEMONSTRATION

In an interesting demonstration at the Toronto General Hospital in June, before members of the Radiological Section of the Canadian Medical Association, Dr. A. H. Pirie, of the Royal Victoria Hospital, Montreal, illuminated lead type with x-rays in such a manner that observers, though their eyes were closed, received a registration of the type on their retinæ. Dr. Pirie stated that he had tried to read thus through the back of his head, but without success, though flashes from the x-ray tube had been visible.

CANCER WARNING

Warning of a marked increase in recent years of cases of cancer of the bronchi was presented in June to the joint annual meetings in Toronto of the Canadian and Ontario Medical Associations by Dr. J. C. Meakins, Chief Physician of the Royal Victoria Hospital, Montreal, and Director of the University's Medical Clinic. This form of cancer, Dr. Meakins reported, had increased in ten years from 1½ per cent. to 12 per cent. of all cases. It occurs in men twice as often as in women, is invariably fatal, unless treated at once, and, as half the cases occur before the age of 45, refutes the belief that cancer is a disease of old age. Surgery at an early stage, Dr. Meakins stated, is at present the only treatment holding out hope for recovery.

CHEMICAL ENGINEERING

Changes in courses recommended by the Faculty of Engineering and approved by Corporation include a strengthening of the course in Chemical Engineering by the omission of some subjects and the substitution of more fundamental work in the application of engineering to chemistry. It is felt that the changes now approved will benefit the Faculty and students in Chemical Engineering courses.

DEATH OF DR. J. W. WALKER

Graduates of the period from the late 1890's to 1912 will regret to hear of a cable from Stirling, Scotland, on June 13, which announced the death of Dr. J. Wallace Walker, formerly Macdonald Professor of Organic Chemistry at McGill. Dr. Walker resigned from the University staff, owing to approaching blindness in 1912, and was succeeded by the late Dr. Ruttan.



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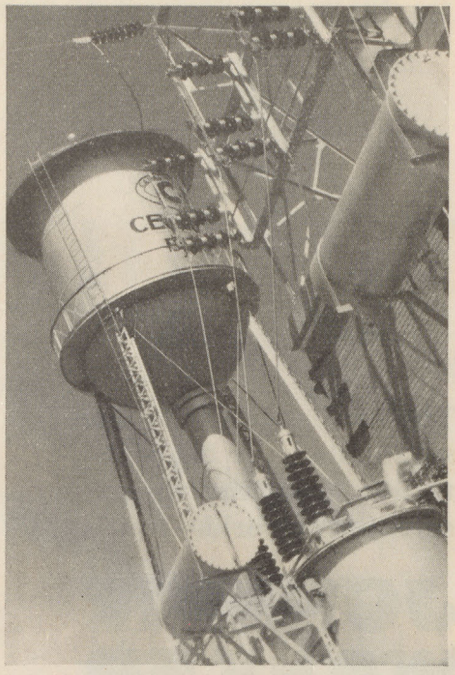
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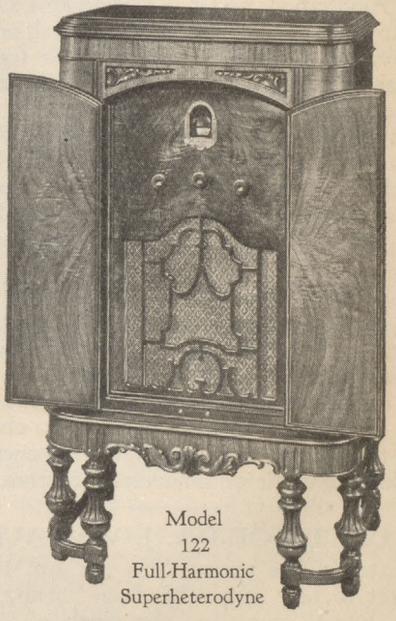
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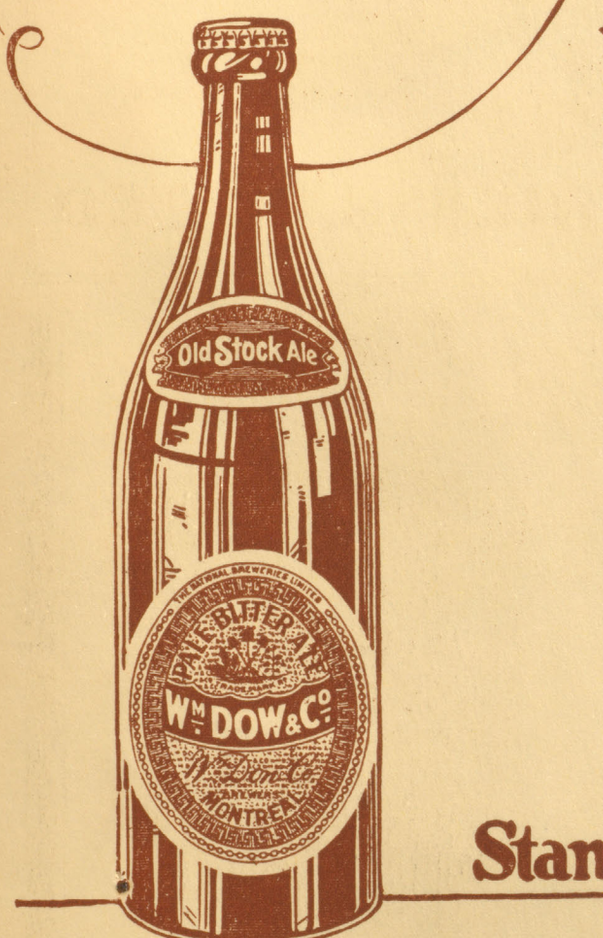
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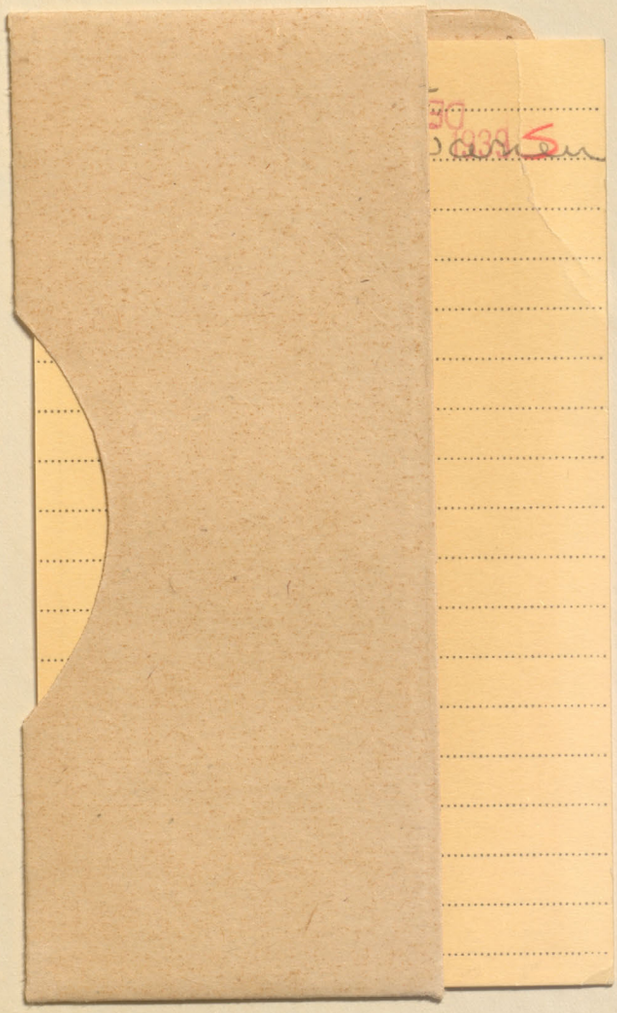
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